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Paper puts 3000 poly, college jobs in danger

by Karen Gold

National Advisory Body group members this week fought off an apparent attempt by the Department of Education and Science to impose staff: student ratios on all polytechnics and colleges, which would mean the loss of 3000 jobs.

The NAB Technical and Data Group insisted that a DES paper calculating the difference between actual ratios and those recommended by Her Majesty's Inspectorate last year was a policy matter and should be postponed for the NAB board to consider next week.

The paper says only three institutions – Sheffield and Plymouth polytechnics and Hertfordshire College of Building – are at or above the ratios calculated and recommended by the inspectorate last year.

It compares those with the ratios in institutions in the 1982/83 academic year. It calculates for all polytechnics, major colleges and other colleges doing considerable advanced work how many posts would have to go by 1985 in order to meet the HMI ratios.

Despite the increase in student numbers over that period, the paper says that the overall cut in lecturing staff in polytechnics would have to be 9 per cent, and in major colleges 17 per cent. That would mean a loss of 2,396 posts from the two groups.

By estimating the jobs to go in small colleges, and making an allowance for full-cost students who were not included in the 1982/83 figures, the department calculates that another 600 posts would go, making it 3,000 in all.

The paper lists figures for the implied reduction in staff for almost 100 institutions. The HMI recommends that polytechnics move to an average staff-student ratio of 11.7:1, although the actual ratios calculated by the DES in its table vary quite a lot from that. City of London is the lowest at 12.7:1 and Leicester is the highest at 11.2:1.

The polytechnics have less far to go than the major colleges, the paper says, since their ratios in 1982 were generally higher, but they are expected to move to an average 12:1.

The biggest job losses are not always among the expected institutions. North East London Polytechnic is near the top with 116.5 jobs to go, but North London is even higher with 119.6 losses. The overall loss of jobs in London would be considerable, since three other London polytechnics – South Bank, City of London and Central London – are all near the top, with 89.2, 99 and 80.5 losses respectively.

The London art colleges would also lose 84.6 posts. Three polytechnics would need extra staff because of their increased student numbers – Birmingham, Plymouth and Preston. But others which have taken large increases in student numbers would still lose some posts, for example Teesside faces 18.

Other institutions which would lose large numbers are Leeds, Trent, and Bristol polytechnics – 112.1, 80.3 and 69.8 respectively. Bradford and Ilkley College, would lose 77.5, Derbyshire College of Higher Education 64.3, and the London College of Printing 56.3.

The figures do have two caveats attached. First the NAB target numbers exclude overseas students paying full-cost fees and short course students, so even institutions operating on recommended ratios overall would appear to be better staffed than in these tables. Secondly, since the recommended ratios are calculated by adding up those recommended by subject specialist HMIs, the total figure for each institution is not quite as accurate as the subject figures.

Sir Keith wants more say in v-cs' survey

by Ngaio Crequer

Sir Keith Joseph, Secretary of State for Education and Science, has told vice chancellors to think again on two crucial aspects of their proposed efficency survey in the universities.

Sir Keith, who was given details of the vice chancellors' proposals at a meeting last week, said he was sticking on two points. He wanted Government involvement in the composition of the survey teams and a much wider scope for the inquiries.

The Committee of Vice Chancellors and Principals has always insisted in its talks with ministers and officials that although it is prepared to carry out the efficiency inquiry, it should be independent of the Government.

But the signs are that they are now prepared to concede the point, in order that their scheme becomes acceptable. It has been made clear that refusal to do Sir Keith's bidding would result in reduced funding.

What officials have in mind is representation of the Government's efficiency unit on the survey teams. The CVCP wanted the teams to consist of just university officers and independent consultants, with University Grants Committee support.

The efficiency unit is a seven-strong team in the Cabinet Office. It reports to the Prime Minister through Sir Robin Ibbs, her adviser on efficiency.

It is currently carrying out two inquiries across six Government departments – looking at support services for administrative work, consultancy, inspection and review capabilities.

The insistence on a wider scope for the reviews may be a question of definition. The CVCP has said the surveys must not question teaching and research but accepts that they can look at management systems.

The Department of Education and Science says this means they must be able to question decisions about the allocation of resources. This obviously strays into academic decisions.

Officials from the DES and the CVCP will meet in the next couple of weeks to agree the final structure of the reviews. The CVCP is also now looking for someone to head the steering group that will supervise the reviews.

Laser research complex faces closure threat

by Jon Turney
Science Correspondent

This year's budget debate in the Science and Engineering Research Council has produced a serious threat to a multi-million pound laser research complex used by over 100 university researchers.

The council's science board has looked at upper and lower financial guidelines for 1985/86 and concluded that imposition of the lower guideline would mean closing the £2m-a-year central laser facility at the Rutherford-Appleton Laboratory in Oxfordshire.

Each of the four SERC boards has been instructed to offer plans on two guidelines. The upper limit for the science board is roughly level funding and the lower limit means a 2 per cent cut.

The laser facility is widely recognized as generating first class research in plasma physics and the behaviour of matter under intense energy bombardment, and has attracted important international collaborators. Some council members regard the threat to close the facility as unnecessarily provocative, but members of the science board argue that there is no other comparable saving open to them.

They argue that the other large science board facilities – the synchrotron radiation source at Daresbury and the spallation neutron source at Rutherford – are even more important. The neutron source, which came under threat two years ago, will not be ready for users until late this year and cost nearly £50m to build.

The only other option would be to cut university research grants and studentships, the science boards argues. It wants to increase grant support, in common with the other boards.

If the overall council budget remains level, forcing through the lower guideline for any individual board will depend on the council's judgment of the bids each board has made for extra funds. Here, the science board is seeking substantial increases for university grants and for research in solid-state physics for the new kinds of microchips – known as work on "low-dimensional structures".

The astronomy, space and radio board, which faces cuts of £2m next year in any case, wants assurances of funding for a new UK-led space mission later in the 1980s. The engineering board wants approval for a new effort in manufacturing automation, as well as having to find extra money to meet the council's commitment to the Alvey programme for computer research.

The council has contingency funds for new developments of £6m in 1985/86 and £9m in 1986/87, but most of this is likely to be used to relieve pressure on university work. The rejection rate for grants placed in the top category by referees is now nearing 50 per cent.

Pamela Horn dispels nostalgia about English country life, 15

Debate 'a smokescreen' says Labour Party

Government figures on student demand mean either the closure of several universities and polytechnics, or the closing down of whole departments, Labour Party spokesmen said yesterday.

In a joint statement Mr Giles Radice, Labour's chief education spokesman and Mr Andrew Bennett, spokesman for higher education, called upon vice chancellors and polytechnic directors to speak up loud and clear about the implications of Government figures.

They said that the debate on the future of higher education was "no more than a propaganda smokescreen to disguise their intention to contract the system."

They released an open letter to Mr Christopher Ball, of the National Advisory Body, and Sir Peter Swinnerton-Dyer, chairman of the University Grants Committee to say that in the past higher education had been for the "educationally well-fed". In future there must be wider opportunities and security of funding and the case for higher education must be made.

The Labour Party has also published its replies to the UGC and NAB questionnaires on future strategy. They want radical changes in the admissions policies to open institutes up to less traditional groups, replacing A levels.

For the universities some first degrees should become more broadly based, combining arts, sciences and social sciences. The bias against research in the social sciences should be reversed.

There should be no essential differences in the teaching functions of universities and polytechnics. The UGC should be replaced with a Universities Council, with two tiers, a policy committee and academic committee, and an independent secretariat shared with NAB. There should be a comprehensive approach.

Science park criticized

A new economic study rubs the gloss off the much-lauded Cambridge University science park. The study finds that firms in the park have few more academic research links than other, similar firms in the region, and that the park has made little contribution to local employment.

The findings come from work by Barry Moore of the Cambridge University department of applied economics and Rodney Spires of Cambridge City Council's planning department. Their report for the Paris-based Organization for Economic Cooperation and Development (OECD) went one better than most studies of science parks by comparing the park with other sites in the region.

They found that only 24 per cent of the 25 firms on the science park opened in 1973 on a site owned by Trinity College had research links with the university. This compared with 19 per cent of other companies in the region, itself an ususually high figure.

On employment, the authors concluded that it was likely as many jobs would have been created without the park development by firms attracted to Cambridge for other reasons. And their evidence suggested that the new companies on the Trinity site offered fewer jobs to local residents than other firms because they had more employees with specialist skills recruited outside the region.

With around 50 other science parks planned or under development in Britain, the Cambridge findings are significant because in most respects the Cambridge science park fits the more first established in the US.

Most of the firms on the Trinity are science and research based cerns, making high-technolo ducts with a well-qualified wo But it is clear that proximit university was not their mai on for renting space on the site. Ino many firms had research links in UK regions as were doing work w the university. The researchers con clude that if firms need research done they will go out and find the right people with distance no object.

While many companies sited the attractive environment as a reason for their choice of Cambridge, the study suggests that special low-density developments like the science park are probably unnecessary. And the authors conclude that "conventional industrial development would have produced three times as many jobs for local people" compared with the Cambridge science park.

letters to the editor

Utilitarian view of education

Sir, – Alan Wilson's "radical framework" for a multi-disciplinary degree (*THES*, February 10) betrays both a worrying level of ignorance about what has been achieved in this area over the past decade, and a set of assumptions about the nature and purpose of higher education that are disturbing.

It is not true to claim that existing multi-disciplinary degrees are cobbled together from elements of single discipline programmes, although this may be the case for many university joint honours degrees. Nor is the second premise, that multi-disciplinary degrees are unpopular and undemanding, true. Again, in many of the universities where the single discipline reigns supreme, structurally present in their departmental organization, and where no external accountability for course design and curriculum exists, this may be so. Students on such courses however often have to work extra hard to meet the requirements of competing rather than cooperative departments, they undertake courses whose design is influenced more by administrative convenience than academic coherence, and if they are seen to lack the "hard" knowledge and skills of their single-honours peers this is all too often a self-fulfilling prophecy.

By contrast, in the maintained sector, a large number of multi and inter-disciplinary courses have been designed and successfully taught since the mid-1970s. Their popularity may be judged by the 2000 students who have so far graduated from the Oxford Polytechnic modular degree alone. The Council of National Academic Awards interfaculty studies board was set up specifically to validate and monitor on behalf of the council courses crossing sciences, social sciences and humanities. It probably represents the widest existing pool of knowledge and experience of the issues raised by Professor Wilson, yet he seems unaware of it. The work of the interfaculty board and of the institutions launching such multidisciplinary degrees suggests that far more than pious hopes and finely-tuned curriculum concepts are necessary to their successful operation. Most of them have involved innovative management and counselling structures as well as detailed thought and experiment on progression and balance of theory, method, example, core themes and disciplinary options, modes of assessment and appropriate teaching methods. If anything has been learned it is that a blueprint for such a course simply does not exist; incremental advance from existing best practice is a better model.

But Professor Wilson's article worries me far more than this apparent ignorance of developments in multidisciplinary higher education. He writes in the terminology and with the concepts of systems theory. The curriculum is built of "foundations studies", "general" and "substantive" systems, traditional disciplinary concerns become "systems of interest" and the new degrees must not be "soft" when compared to single honours courses. This is the language of a "hard", macho, technology, of cybernetics and management. It is not the language of a critical but humane scholarship but speaks of a narrowly utilitarian view of higher education. The view becomes explicit towards the end of the article: "such graduates would probably be much more use to industry than conventional ones". The humanities become a sort of cultural veneer for the scientist rather than disciplines making their own rigorous intellectual demands, not a surprising view from an author who expects English to supply students with "writing skills". If higher education is to be regarded as technical training then this scheme may offer an inoffensive initial doodle, if it is to offer more to its students and teachers, then the assumptions upon which this blueprint rests are dangerously narrow.

Has it, I wonder, occurred to the professor of *urban and regional* geography that *geography*, unprefixed, has always been able to offer a range of concepts, skills, theories and methods which make it potentially a multi-disciplinary degree in its own right? He will doubtless be aware of the problems of constructing a coherent and unified curriculum within geography, to cross other disciplines in addition increases those problems factorially.

Yours sincerely,
DENIS E. COSGROVE
University of Technology,
Loughborough.

More aid for overseas

Sir, – I would agree with the vice chancellor of Oxford University, Mr Geoffrey Warnock, that the government should do more to encourage students from underdeveloped countries to study in Britain (*THES*, February 10).

Mr Warnock's finding that students from the poorest countries are underrepresented in the overseas student intake to Oxford is borne out nationally. In 1974/5 students from the 30 least developed countries formed only 6.1 per cent of the total overseas numbers in the public sector and by 1981/2 (the last year for which national figures are available) the proportion stood at 5.3 per cent.

Dramatically rising fee levels and the introduction of full cost fees in 1980/1 have brought about a huge decline in overseas student numbers from a peak of 86,779 in 1979/9 to 57,840 in 1981/2. The decline in numbers among students from the poorest countries has been least precipitate. Yet this is no reason for complacency. The relative buffering of this group is probably due to two causes: first, their numbers were already very low before 1981/2 indicating that high costs had already placed entry to British education beyond reach of most of these students; second, more of these students are likely to be supported by funding from public institutions, who are generally slower in adjusting their financial plans to changing circumstances than are private sources.

The new injection of funds within the Pym package to assist students from the underdeveloped countries is welcome. However, we believe further efforts need to be made to increase and improve existing provisions. In particular, we hope that the government will reconsider making funds available through educational institutions and non-governmental organizations in order to allow assistance to worthy students not included in existing schemes.

Yours faithfully,
NIGEL HARTLEY,
General secretary,
World University Service (UK)
20/21 Compton Terrace,
London.

Two and four

Sir, – Why is Mr Pickard so anxious to discredit polytechnic achievements? (*THES*, February 3). His figures for losses of students between first and second years, and first and third years are no less than 24 per cent and 36 per cent respectively. I understand, on good evidence, that the average figures for polytechnics are nearer 14 per cent and 20 per cent. For universities the corresponding figures are about 8 per cent and 10 per cent.

Using these loss rates, reasonable distributions for three-year and two-year courses for a total of 3000 students would be for a polytechnic 1130, 970, 900 and 1615, 1385, and for a university 1065, 980, 955 and 1565, 1435. Hence, the extra intake for two-year courses would be 43 per cent for polytechnics and 47 per cent for universities. These percentages compare with my model's 50 per cent, Pickard's 36 per cent and your editorial's 33 per cent. Which now is the more tenable thesis?

However, the gravamen of my letter lay in the need to consider more four-year courses for certain science and engineering subjects, balanced by two-year courses for students more suited to shorter courses. Dare one suggest that Pickard's highlighting of the loss rates for polytechnics leads to the implication that there should be more two year courses in polytechnics for such students and more four year courses in universities for such subjects?

Yours faithfully,
E. J. BURGE
Professor of Physics,
University of London.

Breaking down

Sir, – It has come to our notice that the travelling workshops experiment, originally funded by the British Library, is encountering financial problems which are preventing it from realising its full potential.

As some of your readers will know, the experiment investigated bibliographic education and, after extensive research in a large number of institutions of higher education, produced a series of learning packages on sources of information. At the end of the project Newcastle upon Tyne Polytechnic assumed responsibility for the funding, preparation and sale of further packages.

Our own experience of TWE is limited to one series of history workshops which we ran recently as part of this college's combined studies (hons) degree. These workshops were based on the package *British history, 1760–1960*, compiled by Professor Norman McCord and Sue Lacey and published in 1979. They were highly successful and consequently the staff concerned would have liked to run similar TWE workshops in other subjects. We were, therefore, disappointed to discover that there are now only three packages available, none of which relates to subjects studied in this college. Moreover, we understand that for financial reasons there are no plans either to create new packages or to update the two (history and biology) that have recently been withdrawn. The loss of these is not only unfortunate on educational grounds but also represents a failure to exploit fully the work (and investment) that went into their creation.

It is clear to us that the learning packages have considerable value for higher education. However it seems unreasonable to expect any single polytechnic, especially in the present economic climate, to provide the finance that would be required for the commercial stage. We suggest, therefore, that the British Library, as funder of the original project and copyright holder, should evaluate the existing marketing policy, create a users' group to institute a programme for development. This could, perhaps, involve the creation of a Centre for Bibliographic Education.

Newcastle upon Tyne Polytechnic has offered credit for the long term support and, more recently, funding of £8.

Yours faithfully,
NICK DREW
Tutor librarian,
TERENCE RODGERS
Lecturer in history
Bath College of Higher Education.

Soviet justice

Sir, – May one hope that the new president of the USSR will use his authority to set right some of the injustices perpetrated under his predecessor?

One case which should be of particular concern to the academic community is that of Professor Yuli Kagarlitsky, a leading specialist in English and comparative literature. Professor Kagarlitsky, who is internationally known for his work on drama and on science fiction, is a vice president of the H. G. Wells Society and an honorary member of the Science Fiction Research Association. Recently he was summarily dismissed from the chair he has held for many years at the Lunacharsky Theatrical Institute, "because of his son's dissident activities". (His son, Boris, took part in a "new left" discussion group criticizing Soviet society from a Marxist standpoint.)

I should be glad to hear from any readers who know of Professor Kagarlitski and his work, and who wish to be associated with the protests against this act of arbitrary victimization which are now being circulated.

PATRICK PARRINDER,
39 College Road,
Reading, Berks.

Konstantin Chernenko: will he set right injustices?

Moral tale

Sir, – David Berry's article on philosophy and feminism (*THES*, February 10) provokes a thought. Three of the philosophers mentioned there – Elizabeth Anscombe, Philippa Foot and Mary Warnock – were, along with Iris Murdoch, of my own generation, reading Greats at Oxford early in the last war. Things were then a bit peculiar. There was no rat-race; there seemed indeed to be little future. Wars of words looked rather unimportant.

The few men undergraduates around – mostly conscientious objectors, ordinands or the physically unfit – were not a lot more interested than we were in the game of amazingly clever performances and put-downs which so often wrecks philosophy. And among the few overworked dons who taught us there were some – in particular Donald MacKinnon, tutor to three of us – who were as far as possible from the slick, arrogant, more or less logical-positivist stereotype which made life hideous just after the war.

Though he and others gave us the hard linguistic discipline we needed, nobody imposed on us the subtle and deadly code which makes it shameful to raise large and interesting questions – or indeed any questions at all not prescribed by the very latest fashion. The fungus which puts nearly all women, and a great many sensible men as well, entirely off philosophy was largely absent.

I don't want to suggest that it is worth while starting a European war in order to provide better conditions for doing philosophy in universities. But I do think that we were exceptionally lucky, and that there could be a moral in the tale.

MARY MIDGLEY,
Department of philosophy,
University of Newcastle.

A level grades

Sir, – I am somewhat fazed by Brian Heap's letter (*THES*, February 10) where he writes of several medical school admissions tutors expressing concern about the numbers of applicants seeking medical places with A level predictions of D, D, D grades and less. These are termed "pointless" applications and Mr Heap invites other departments, universities and polytechnics to let him have the approximate number or percentage of "pointless" applications submitted by schools for places on degree courses.

The reality is much more complicated than Mr Heap or those medical school admissions tutors seem to appreciate. Schools, by and large, in giving advice on university entry, will advise candidates of the likely grade requirements for courses and will write Universities Central Council on Admissions testimonials accordingly. It would be very dishonest for a school to write an UCCA reference for a pupil if the school could not fully support the application. If schools do not operate thus, some "pointless" applications could result. However, and often contrary to our best advice, candidates will sometimes insist on being entered for particular courses, for which we believe they may not be academically suitable.

But what of the candidate whom we believe will make an excellent medic, or will benefit from a particular university course but may not attain the going "market rate" in terms of A level grades? Given the unreliability of A level results as predictions of degree results much less adaptability to a university course, we hope the testamonials we write will be read.

How do the admissions tutors and Mr Heap propose to distinguish between these three categories? I have been at the job of teaching long enough to know that our estimates of what our pupils might attain at A level can often be dramatically wrong so what may seem "pointless" to us can seem very realistic to our pupils.

Much more important however, do I detect evidence of something which I have sometimes suspected . . . admission tutors do not read testamonials with quite the same degree of care and attention with which we write them, and would prefer those boxes restored setting out grade predictions which were removed from the UCCA form some years ago. Then they would not have to read what we write at all.

Yours faithfully,
M.T.M. CASEY McCANN
Red Lodge, Oak Lane,
Sevenoaks, Kent.

Right balance

Sir, – You argue (Leader, *THES*, February 10) that it is more important that the University Grants Committee (and later perhaps the National Advisory Body) should establish a proper standing committee for continuing education than that the Advisory Council on Adult and Continuing Education should be revived as an external development agency. What adult and continuing education most needs is balanced development on a comprehensive basis, ranging from literacy and numeracy to postgraduate refresher courses, from liberal to vocational education, from informal to formal courses at various levels. It should be a seamless robe. Without planned development the formal tends to predominate over the informal, the vocational over the liberal, the advanced over the non-advanced. UGC and NAB committees alone would tend to increase this imbalance, and a development council with adequate resources (both 'Responsible' and 'Continued'; *not* a revival of ACACE!) is needed to correct it, and to secure cooperation between the agencies concerned, both statutory and voluntary.

Given the negative and cheeseparing attitudes of the DES, clearly adult and continuing educationists need to be "re-politicized" to campaign for such a council.

Yours truly,
H. D. HUGHES
(ex-member, ACACE)
Crossways, Mill Street, Oxford.

Bogus subjects

Sir, – What can be said against the bogus subject of parapsychology – as in your admirable leading article (*THES*, February 17) – can be said against the equally bogus subject of theology. Many years ago, Russell suggested that it is undesirable to believe a proposition when there is no ground whatever for supposing it to be true." He added that this opinion, if it became common, would tend to diminish the incomes of clairvoyants and bishops. And, he might have added, professors of theology (and parapsychology).

LAMBERT D GODFREY
165 Woodstock Road, Oxford.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Engineering survey slams polys

Polytechnic engineering departments are failing to bring their students up to date with new technology, according to a survey of 13 departments published by Her Majesty's Inspectorate this week.

The survey, carried out between 1979 and 1982, says: "The use of computers is disappointing and insufficient emphasis is placed upon their use in syllabi. Computers are rarely used to back up lecture material and are employed infrequently in laboratory work.

"Computer-aided design and manufacture developments occuring in major industrial concerns are neither reflected in curriculum design nor in engineering teaching. Few students have adequate personal experience of computing techniques."

The report says part of the reason is lack of computing facilities. Accommodation and equipment in the departments is inadequate in most cases, the report says, but the cost of updating equipment seemed prohibitive to some local education authorities.

Students are well-motivated and staff academically well-qualified, although job losses and pressures to raise staff/student ratios have in some departments meant aging staff and less tutorial provisions, leading to higher student failure rates.

Teaching was generally "conscientious, adequate and competent but often of a very traditional expository style centred on chalk board work and usually involving extensive and tedious note-taking by students," the report says. Part-time degree students – who should be taught alongside full-time or sandwich students – travel up to 100 miles each week to attend their polytechnic course.

But as financial restrictions continue to limit both teaching and material resources, the report, says, there is a possibility that some polytechnic engineering departments will decide to concentrate their energies on undergraduate work and abandon part-time and technician work altogether.

Engineering in Polytechnics – a report on HMI visits to 13 polytechnic engineering departments, £1.50 from HM Stationery Offices.

Protests rejected

Cabinet ministers have rejected protests from union leaders and the local authority associations over the White Paper proposals for a partial transfer of control and funding of non-advanced further education to the Manpower Services Commission.

A plea from the Association of County Council for a 12-month stay of execution was rejected in a joint meeting with the Association of Metropolitan Authorities and Sir Keith Joseph and Mr Tom King, secretary of state for employment.

And leaders of the National Association of Teachers in Further and Higher Education emerged from a separate meeting with Sir Keith without swaying the minister. Its president, Mr Cecil Robinson, commented: "The secretary of state seems intent on using a sledgehammer to crack a nut."

The AMA, ACC and trade unions agree that ministers have failed to prove that further education under local control has failed to meet the country's training needs.

The ACC told the ministers that local authorities should be allowed to keep the £65m due to be transferred to the MSC in the first year and following rejection of this proposal is to consider its next step at an emergency meeting of its education committee next month.

Both the ACC and the AMA say they will have to consider their role in YTS unless more reasonable fees for off the job training are agreed with the Confederation of British Industries.

Members of the youth training board were divided on what recommendations should be made to MSC commissioners meeting yesterday on government proposals that an increase in the YTS block grant should be contained within 5 per cent.

Such an increase would raise the grant given to managing agents and others from £1,950 to £2,050 costing

Union 're war over tenure

by David Jobbins

Leaders of the university lecturers' union face a war of attrition over tenure with continued efforts by individual institutions to permit redundancy as a reason for dismissal.

While Sir Keith Joseph, Secretary of State for Education ponders the vice chancellors' package for making tenure harder to achieve, ministers are determined that no newly-acquired academics should have cast iron protection.

And in London two institutions are pressing ahead with moves to weaken tenure – one through the established route of the Privy Council and the other as a way of offering substantive posts to academics who had completed fixed term contracts.

The London Graduate School of Business Studies is the first to include voluntarily a clause permitting redundancy as good cause for dismissal. Its charter application lodged last June, [illegible]refore not got caught up in the [illegible]ected wrangles affecting the Institute of Education and University College, Aberystwyth, which were told that redundancy should be added when they applied for charters.

But it is being challenged by the Association of University Teachers, which points out the importance it attaches to tenure in safeguarding academic freedom.

The business school houses the centre for economic forecasting which manages the school's influential and controversial economic forecasting model. The AUT's deputy general secretary Mr John Akker said: "There have been cases in both the US and the UK where Government or industrial concerns put pressure on institutions to close departments and sack staff, usually by threats of withdrawal of funds.

"Although the school may be producing work in tune with the political objectives of the current Government, future governments might not view it so kindly."

And at the School of Oriental and African Studies, the AUT is claiming that an offer to staff who have ended five-year contracts of substantive posts but with a redundancy clause is a breach of a national agreement on probation because at least two of the 13 currently involved have previously completed probationary periods elsewhere.

School secretary Mr E. O'Connor said the contracts had been negotiated within the joint staff committee on which the local AUT is represented. "The school does not consider it has breached the national agreement," he said.

The local AUT has instructed its representatives on the joint staff committee to withdraw from discussions on redundancy clauses to all staff who complete a satisfactory probationary review.

ILEA plans University of South-East London

by Maggie Richards

A proposal to create a new and "truly comprehensive" university in London, using Goldsmiths' College as the main academic base, has come from the Inner London Education Authority.

The initiative coincides with the announcement this week that the new warden of Goldsmiths' is to be Professor Andrew Rutherford, Regius Professor of English and vice principal of Aberdeen University. He will take up his appointment on September 1.

A preliminary meeting to discuss the ILEA proposal has already been held between officers and members of the authority and representatives from Goldsmiths'. Further grassroots discussions are now to take place between heads of departments at the college and staff from the two other educational institutions involved in the plan – Thames Polytechnic and Avery Hill College.

Though the suggestion of a merger between the three institutions has been mooted for some time, it is now being presented as an opportunity to establish a new "University of South-East London".

Members of ILEA's controlling Labour group are also determined that the new institution would be completely different in outlook to that of traditional universities in Britain.

From the outset it would adopt a completely open access policy, running courses across the entire education spectrum.

Two factors are likely to present problems when discussions on the proposals begin. Funding of the three institutions at present involves the Department of Education and Science, the National Advisory Body and ILEA. A new system of financing the institution would have to be agreed.

Concrete plans for the new university would need to be produced fairly rapidly. The present arrangements for validation of Goldsmiths' courses by the University of London come to an end in 1988.

Goldsmiths's delegacy, the college governing body, will be meeting in May to hear the results of discussions between the three institutions at academic levels. In the meantime it is strongly pursuing the alternative option – for the adoption of the college as a school of London University, and its merger with Queen Mary College.

The new warden, Professor Rutherford, will succeed Dr Richard Hoggart. Aged 54, Professor Rutherford is a member of the General Advisory Council of the BBC.

He is a member of the English Teaching Advisory Committee of the British Council, and was chairman of the CNAA English Studies Board for six years. He also served as president of the Internation Association of University Professors of English for three years.

Professor Rutherford's publications include books and articles on Byron and Kipling.

Rutherford: new warden

Principal in merger struggle

A vigorous struggle is emerging at Royal Holloway College, London, about whether Professor Dorothy Wedderburn should be made principal after the merger with Bedford College.

At a recent meeting at RHC, members of the academic board stayed behind after business was concluded, so that staff could make their views clear on the suitability of Professor Wedderburn, the principal of Bedford.

The RHC principal, Dr Ray Miller, left the meeting before any discussion, and then several senior members of staff expressed strong reservations about appointing Professor Wedderburn.

It was understood at the meeting that a resolution would be put to the next meeting of the RHC council, that there should be no internal candidates for the principalship. But in fact, no resolution was ever put.

A search committee with representation from both colleges is likely to make recommendations on the principalship.

This week Professor Cliff Lewis, professor of zoology at Holloway said there was by no means a "stop Wedderburn" movement.

An informal approach had been made by senior members of Bedford council, and it was agreed that members of RHC staff should make their views known on the principalship. He said it was a perfectly proper sounding of opinion, and these views would go to the appropriate committee.

Professor Wedderburn was unavailable for comment.

Arthur's seat for Edinburgh

Edinburgh University is to establish Britain's first chair of parapsychology, funded by a £500,000 bequest from writer Arthur Koestler and his wife Cynthia.

[illegible] four trustees of the Koestlers' estate who include Dr John Beloff, senior lecturer in psychology at Edinburgh, announced their decision to give Edinburgh the chair this week. [illegible] ious contender was

Polys protest over IT funds

Two polytechnics in the north west have strongly protested to the Council for National Academic Awards over its advice on the allocation of funds for an Information Technology centre in the region.

The CNAA recommended to the National Advisory Body that, despite a Government commitment to establish an IT centre in the north west, none of the three polytechnics there – Preston, Manchester and Liverpool, was suitable to develop it in 1984. The NAB eventually recommended a compromise whereby Preston and Manchester both received some IT places this year, and the question of a centre was postponed to 1985.

But both polytechnics have protested over the CNAA advice to the NAB on the quality of their proposals and existing courses. Manchester's director Mr Ken Green wrote to the CNAA saying: It is the quality of CNAA opinion itself which is really in doubt".

He rejects criticisms that Manchester did not collaborate with nearby universities on IT or encourage inter-faculty cooperation as "rhetorical", He challenges criticisms of objectives, job prospects and examination performance of students on existing courses, and says the CNAA submission on the Manchester proposal "can be characterized as cavalier".

Preston says that criticisms of its submission were made on the basis of a first application which was replaced.

It accuses the council of a breach of trust in only using material submitted for the purposes of validation to assess the IT application.

Aston library 'not meeting student need'

Aston University's library is not meeting the needs of either undergraduates or academics, according to a new report.

A new commitment to "support the university's chosen activities at a realistic level" is recommended by the report, which was compiled by the Centre for Research on User Studies.

Investigators found that over half of the undergraduates surveyed had not consulted reference books, or had used the service only once during the period under scrutiny. Half of those questioned also reported difficulties in obtaining material from the library, the highest proportion being undergraduate and postgraduate students.

Undergraduates confronted with problems in obtaining material tended to buy the necessary items themselves, borrow from others, or give up the search. Only 38 per cent of undergraduates questioned had used the resources of other libraries, while 78 per cent of research staff had sought information from external sources.

Though the library was a crucial source of course books, virtually all students reported difficulties in obtaining the required material.

Most research students felt the university library could not be expected to meet all their needs, so relied more extensively on the inter-library loan service. But within Aston, research students reported a poor range of books, and a very limited range of journals and other materials.

Academics tended to feel the university library should be catering principally for the needs of students, and were more likely to purchase their own material or obtain them from outside sources.

The University of Aston Library – three studies, by Colin Harris and Christine Mullings, is available from the Centre for Research on User Studies, University of Sheffield.

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AGE GROUPS
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DON'S DIARY

Evening: hell hath no fury like a US president scorned. Night-long barrage from US naval vessels lying offshore, the world's biggest battleship, the New Jersey, pumps 500 one-ton shells into the Lebanese mountains in unconscious parody of a similar incident in Conrad's *Heart of Darkness*. Perhaps the study of English literature does have its uses after all. No US naval commander who had read Conrad would have laid himself open to such acts of thundering futility.

MONDAY FEB 6

Once again the American University of Beirut (AUB) has been obliged to close. Not altogether clear who is responsible. Rumour suggests that closure has been demanded by the leader of the Amal Shi'ite Moslem organization, Nabih Berri. Others claim that the AUB administration has made the decision to forestall campus inter-communal violence. Where the initiative lies is irrelevant. Ever since the assassination of Dr. Malcolm Kerr, AUB president, on January 18, a drift towards renewed fighting been gathering momentum.

Two weeks to go before end of semester; probably a fruitless exercise to begin marking papers; likelihood of classes resuming seems remote. Difficult to remember last time we concluded a semester elegantly and on the appointed date.

TUESDAY FEB 7

AUB still closed. Thank God! After last night's ear-splitting, continuous barrage had overslept. Am now quite adept at distinguishing between rocket and shellfire, and can calculate the probable distance away of the artillery piece that fired it, thanks to my new, duty-free, multi-functional Seiko wristwatch, bought for a song last week from a man with a suitcase on Hamra Street. Make casual inspection of the damage on campus. Shattered tiles; broken glass; assorted debris; a burst water main. Director of physical plant estimates the cost of repair at around $400,000, which seems relatively little considering the assorted missiles that rained in last night.

Off-campus, however, the damage is much worse. Once again, AUB's good fortune seems to have held. Saddened to hear of the deaths of two local acquaintances and injury to another. Latter had made his way to the AUB Hospital, where he had been given emergency treatment in the waiting room of the outpatients' department, as all beds occupied by casualties.

Miraculously, no AUB faculty, staff or students on campus suffered from the bombardment, though an estimated half dozen shells had landed on student dormitories. Perhaps no less a miracle for those who had been cowering in basements while the Lebanese army and Phalangist forces had traded fire with Shi'ite Moslem irregulars and Lebanese army deserters, was absence of enmity among all concerned. Christian and Moslem, foreign and local, faculty, staff and students, all were victims. Politicians? Useless bastards. Superpowers? Cynical and untrustworthy. Reagan? Stupid shithead. Curious how one's language falls into convulsive spasms of obscenity, living in Beirut.

WEDNESDAY FEB 8

Still no classes of course. Rather scruffy armed men have taken over the campus gates from Lebanese army regulars. They appear quite amiable. Establishing one's identity at their checkpoints may even be entertaining. No longer gutteral barks in Arabic, demanding production of one's *hawiyya*; instead, affable, hirsute grins and proud but uncertain English: "Hello, what is my name?" Wonder how long *that* will last?

Rumours that certain contingents of the Multi-National peace-keeping force may be leaving. Discover an hour later, that the British already have. US marines announce their "re-deployment."

THURSDAY FEB 9

BBC Overseas Service newscaster and local hero, Gerry Butt, informs his attentive Lebanese constituency that Larry Speakes in a press conference delivered at President Reagan's California ranch had announced that US naval ships had fired on "Moslem" positions and silenced gun batteries. Syria claims there have been heavy civilian casualties, and in any event the shelling from the mountains has continued.

Reagan seems determined to walk firmly into the hole the Lebanese president and the Christian Phalange have dug for him. Once again, it appears, the US has decided to prop up a minority government in the face of the Moslem majority; local American residents begin to peel the thin film from their mounting paranoia; suitcases are packed; US naval helicopters land on the seafront corniche in front of AUB to pull out "non-essential" US embassy personnel." Actually, the Brits are the first to announce evacuation plans for their local residents. Gerry Butt tells us we must tune in to the BBC for more detailed information.

FRIDAY FEB 10

Distinct feeling of *déja vu*. How many times before have we had to go through this "will we-won't we" routine? By now we are quite knowledgeable about the inevitable discomforts of evacuating. Last time it was a container ship and iron rations, courtesy of HMG from the British army base at Episkopi in Cyprus. (The French and Italians, by contrast, went out on a cruise boat, all expenses paid.) "If you think it's going to be a pleasure cruise, forget it," say I, a seasoned evacuee, to relative newcomers. "And the alternative?" "Take your chances, keep your head down, and be prepared to cope with shortages of food, water, electricity, cooking gas, dawn-to-dusk curfews, crushing boredom and a few moments of sheer, fucking terror." (There I go again). "I might be able to get some writing done."

"Forget it. You may intend to, but you'll end up spending most of your time listening to the radio and foraging for fresh vegetables."

Noon: Evacuees beginning to assemble on the corniche in front of my bedroom window. Better get some letters written, so one of them will be able to mail them from Cyprus. Might as well try and knock off something for *The THES*. They took a similar piece before. A few extra pounds in the bank could be a blessing. This time, we may all be out of a job.

Evening: The last of the helicopters have whirred away with their load of waving Brits. One does feel smug, though, at having decided to stay behind. Feeling too unsettled to open a book. Not scared. Unsettled. All those embraces, tears and hearty ho-ho's. "And if we aren't able to get back this time, here's £100 to have someone put the dog down." Not quite the rich and unhurried round of academic life that I expected. Come to think of it, when was the last time I read a serious book, a really serious book?

Middle manager in hospital administration living on the third floor has a video. He stayed too. Later: Watched *Karate Killers* in preference to *The Day After*. Tomorrow I really will get some serious work done. In the meantime, must try to find a store which sells Kitty-Litter. Nice to have a Siamese cat in the house again.

John Munro

The author has been professor of English at the American University of Beirut since 1965.

Sir Peter predicts more cuts

by Paul Flather

Universities can expect some further "nibbling away" of resources over the next few years, Sir Peter Swinnerton-Dyer, chairman of the University Grants Committee, confirmed in Cambridge this week.

Sir Peter, a former vice chancellor of Cambridge, was answering questions on the role of the UGC from about 40 student officers of the Cambridge University's Students Union and from other college unions.

Sir Peter said that since 1973 universities had experienced some nibbling away of resources, followed by a sharp cut in 1981, and it looked as if this nibbling away would continue.

The latest expenditure White Paper included a half per cent "efficiency cut" for each of the next three years and it also tended to underestimate for inflation.

But it would have been much worse if Sir Keith Joseph, Secretary of State for Education, had not continued to fight his corner against the Treasury long after other Cabinet colleagues had given up, he said. He admitted that while the cuts were being implemented very little money was actually being saved.

Sir Peter strongly denied that the current consultation exercise sent to all universities was a prelude for predetermined cuts. This assumed the Government had known what expenditure levels were likely to be and that it had told the UGC. Neither had happened, he said, and the exercise was perfectly genuine.

In a separate lecture, this time to university officers, Sir Peter re clear universities were going to be duty to spread their research rather more unequally in future warding people of promise and ing the temptation to keep "ducks" afloat.

Sir Peter, speaking on the UGC research funding, reaffirmed his that universities would have to specializing as research funds decl The choice was either spread money more thinly or concentrate he said.

He said there was still a ten tendency in universities to stay the "old subjects" leaving no re resources for new subjects. "If univ sities do not resist that tendency th will plummet down the pecki order".

Sixteen-year-old Lesley Crawford, who travels 150 miles between Scarborough and Leeds every day, is thought to be the longest-distance traveller on a youth training scheme. Lesley, who sets off for her secretarial couse in Leeds from her Scarborough home at 6am, hopes to be a secretary when her training finishes next month.

Heriot-Watt pharmacy may get reprieve

by Olga Wojtas
Scottish Correspondent

The University Grants Committee is to review its decision to axe Heriot-Watt University's pharmacy department.

There was widespread condemnation of the move when it was announced at the beginning of the year. This heightened when it was revealed that the UGC panel earmarking departments for closure had produced a secret report ranking university schools of pharmacy in order of merit.

The UGC had said Heriot-Watt school should be axed since its intake of 45 fell below the recommended minimum of 60. But the confidential report from the panel of studies allied to medicine showed that four schools fell below the minimum. Heriot-Watt was picked out because it was considered the weakest of the university schools on the mainland in terms of academic attainment and its research "remains modest".

The UGC has now told the panel to prepare a new report and its full committee will make a final decision on the department's future on March 22.

The Pharmaceutical Society of Great Britain has condemned the panel's view as "subjective opinion". It added it was unfortunate for the report's credibility that the school favoured as the strongest were the only ones with representatives on the panel.

The society's secretary and registrar, Mr Desmond Lewis, wrote to the UGC attacking the secrecy of the report. The entire pharmacy department of Queen's University, Belfast wrote a strong letter to the *Pharmaceutical Journal* urging the UGC to form a new panel on pharmacy.

The UGC has also been lobbied by a number of groups, including Boots the Chemist, pointing out that pharmacy is a regional profession.

Sir Keith praises NAB

Sir Keith Joseph, Secretary of State for Education and Science, this week said he was pleased with the National Advisory Body's work. Only weeks before he decides the NAB's future Sir Keith said: "I think the Government has been very fortunate in the quality of cooperation given by the local education authorities here, and this quality of the people who have been involved. I regard myself as very lucky in holding my office to have the NAB procedure in being.

Sir Keith was making his first appearance before the new Commons Select Committee on Education in what Sir William van Straubenzee, the chairman, described as a "general reflective walk over the whole spectrum".

He answered questions on the cuts at Salford and Aston universities which he said were a matter for the University Grants Committee. He also spoke about the binary divide which is already looking different with the establishment of the NAB and the merger in Ulster.

On this subject of student grants he said he had preferred loans, but this was not the decision of the Government, and was not on the agenda. "I have said if the Government wanted to get it back on the agenda, there would need to be an announcement and consultations," he added.

"Sir Keith welcomed the university vice chancellors' new committee to look at quality. "I am concerned about the quality, and in some cases the quality and the quantity of many aspects of higher education," he said. He added however that he had mainly to rely on the universities and local authorities to monitor it.

He ruled out making adult education provision a duty for local education authorities, but did not commit himself on whether it should be clearly established as a power. At present its status is uncertain.

Welsh plans rejected

The University Grants Committee has told the University of Wales it can provide no more new money for teaching in Welsh except for a small sum for an external degree.

It has turned down proposals for a substantial development of Welsh-medium degree over the next five years. The proposals were for a further 20 posts, an editorial board to finance the production of relevant texts and a research officer to study trends in demand and improve the flow of information. The total cost was £224,000 plus £28,700 for extending teaching of Welsh to adults.

The UGC has agreed to provide only an £11,000 grant, rising to £13,000 for the external degree taught in Welsh. Existing provision of 38 teaching posts and courses provided in 13 disciplines will not be affected.

The university said the UGC decision was a bitter disappointment. "The university was convinced that it must play its part in providing for the needs of Welsh school leavers who wished to pursue their degree studies, albeit in a limited range of disciplines, through the medium of Welsh.

"It was hoped that the UGC would even in these straitened times find funds to enable the university to discharge its special responsibility for Welsh language and culture".

A spokesman said the UGC has said the university must determine how to sustain its activity within its normal recurrent grant, yet Wales had already had to shed over 200 academic posts.

● The University of Wales Institute of Science and Technology has set up a special committee to examine engineering after a UGC letter suggested the subject should be merged with applied sciences at University College Cardiff.

Computer invents students

Fife Regional Council has paid Strathclyde Region £800,000 for 132 non-existent students because of a computing error.

The Scottish local authorities pay one another for students whose home is in one region but who study in another. Fife gave one of its further education courses a code number which the Scottish Office computer had already allocated to a college in Strathclyde. This result in 132 Fife students being listed as emigrants to the West.

The regions are concerned that this newly-discovered error may be only the tip of the iceberg. There are fears that they are charged for students who are either supporting themselves or funded by industrial training boards, and for students who are enrolled on courses which they never begin.

There also seems to be widespread confusion over students' home addresses, which some regions class as the address on one particular date.

FCS attacks 'malpractices'

Conservative students are planning a new assault on what they regard as non-democratic practices which lead to decisions being unrepresentative of majority opinion.

The Federation of Conservative Students this week complained of "widespread malpractices" despite the steps already taken and called for referendums on important issues, secret ballots and higher quorums at general meetings.

groups responded has disclosed that cross campus ballots are used in only 20 per cent of colleges in some cases and that the average quorum for general meetings, the most important decision-making body in 75 per cent of cases, was only 4.6 per cent of the student body.

FCS vice chairman Mr Julian Sampways said: "Decision-making can be legitimized by as little as 2 per cent of the student body and we also found

Poly students 'more highly motivated'

by David Jobbins

The myth that polytechnic students adopt a more superficial approach to their studies than their university counterparts has been exploded in a new analysis of research into student attitudes to teaching.

Instead polytechnic students across all main subject areas were found to be more highly motivated than university students.

Paul Ramsden, from Newcastle Polytechnic's educational development service, set a number of commonly-held suppositions about different approaches against data collected by researchers at Lancaster University.

The key supposition was that polytechnic students would have a more superficial approach to study and be more concerned with learning details by rote with the aim of securing qualifications to obtain a job.

By contrast, university students would be expected to exhibit a deeper approach and be more concerned with study for intrinsic academic reasons than vocational goals.

The assumptions are reinforced by the popular view of universities as academic hothouses while the vocationally-oriented polytechnics are regarded as second-class institutions aimed at producing employable graduates.

Mr Ramsden says that the idea polytechnics offer a poorer quality of undergraduate education has never been properly tested.

The 2,208 university and polytechnic students questioned not only provide evidence that the popular assumptions about the type of study are wrong. Their answers led Mr Ramsden to conclude that the standard of teaching performance and the help given to students in approaching academic work was better in the polytechnics.

This may be because of the effect educational advisory units have on polytechnics and monitoring by the Council for National Academic Awards. It may explain why polytechnic students have better than expected study habits.

"These results provide some evidence to sustain the view that deliberate efforts to improve teaching in higher education have worthwhile effects on student learning," Mr Ramsden says.

He suggests there might be some educational advantages in weakening the rigid barrier of the binary line.

"It is somewhat ironic that polytechnic graduates are actually more likely to be unemployed than their university counterparts," Mr Ramsden says.

"Institutional variations in British students' approaches to learning and experiences of teaching" by Paul Ramsden, in *Higher Education* Vol 12, No 6, Elsevier Science Publishers BV, PO Box 211, 1,000, AE Amsterdam, The Netherlands.

Drastic action for OU in bid to avert crisis

by Maggie Richards

Crash measures including a 3,000 cutback in student intake next year have been agreed by the Open University senate in an attempt to avert a financial disaster.

The emergency action follows a Government decision to sharply reduce funding through the Department of Education and Science grant. The university estimates it will now need to reduce spending by £10m during 1985 and 1986, and it is already facing a shortfall of £3.2m this year.

Revised plans for the long-term financing of the university are being drawn up by a team headed by Dr John Horlock, the vice chancellor. Its findings will be presented to academics in June.

Immediate measures to reduce spending this year include cutting the university's huge postage bill – incurred in mailing course material to students – by an estimated £119,000.

Other cuts will be imposed on production of course material and the cost of publishing. The amount of financial assistance to students will also be reduced. Dr Horlock has already used his executive powers to halt production of any new courses by the university and to freeze staff appointments.

A grim report from the university's academic board to the senate last week highlighted the grave financial problems facing the OU in 1985 and 1986. "Decisions on 1985 activities cannot be taken on normal planning timescales because the size of the indicative grant reduction is such that cutting back on 1985 planned activities needs to start now, if 1985 is to be manageable," it warns.

"Indeed 1984 budgets may well need to be reduced further if adverse trends occur. Because the university has no reserves, there is no time to spread or postpone the correct reaction to unforeseen adverse movements, if income and expenditure is to continue to be planned to break even, and the university is not to run out of cash."

The report, which was adopted by the senate, envisages a drop of 2,800 in student intake in 1985, bringing the OU's total student population down to 58,000. But it points out that any reduction below this number would be uneconomic, based on current costs.

Two thirds of vacant postgraduate studentships would be frozen and research funding would be curtailed. The academic board is still struggling to find ways of funding the courses planned for next year.

In its examination of the long-term financial prospects, the university's specially appointed team will be investigating such issues as the role of broadcasting; the growth of the continuing education programme; and the future of the tuition and counselling services. It will also be looking more closely at staffing.

At the meeting last week academics agreed there should be no decision on compulsory redundancies without reference back to the senate.

Committee on industry formed

The Committee of Vice Chancellors and Principals has appointed the members of its new advisory committee on industry.

It includes Kenneth Durham, chairman of Unilever; Sir Austin Bide, Glaxo Holdings; Mrs Sara Morrison, General Electric Company; Brian Oakley, the Alvey Directorate; Sir Alastair Pilkington, Pilkington Brothers; Mr Matthew Bullock, Barclays Bank; Viscount Caldecote, Investors in Industry; Dr Charles Reece, Imperial Chemical Industries; Mr M. F. Wood, the Oxford Instruments Group; Professor Peter Mathias, Oxford University; and other senior academics, industrialists and lay members of the council. Also serving are the vice chancellors from Stirling, Salford, Edinburgh, Surrey, the London Business School, Manchester and Leicester.

New warden

Professor John Roberts, the vice chancellor of Southampton University is to become warden of Merton College, Oxford. He replaces Sir Rex Richards, who is to retire from the wardenship this October. Professor Roberts will take up the appointment in September 1985.

Before he went to Southampton in 1979 as vice chancellor, he was fellow and tutor in modern history at Merton, as well as acting warden on two occasions.

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How polys can get to grips with IT

Information technology will create many problems for higher education teachers but it won't threaten jobs. In spite of the new technology's reputation in other fields, there is no evidence that it saves labour in education, according to Dr Tim O'Shea of the Open University's department of educational technology.

Dr O'Shea was speaking at a meeting on staff development in information technology organized by the London and South East Regional Polytechnic Consortium, to consider how poly teachers could start getting to grips with IT. He was convinced that "the only way universities and polys can cope with these new technologies is by adding staff".

Existing staff would also have to change their ways, he felt. In particular, computer specialists must share their knowledge more readily. "Computer staff have only one option – they must deskill themselves," he said.

Dr O'Shea and other speakers also foresaw academics being forced to work in teams. Dr Andrew Trew, director of the Legal Technology Group at the Polytechnic of Central London, argued that universities and polytechnics must form partnerships with industry to produce computer programs and videodiscs for training. Otherwise, the top experts in many disciplines would be lured into commercial work.

On the problems of managing students' introduction to information technology, Tim O'Shea said, there were real worries about the relationship some personality types could develop with computers.

Letter 'no substitute for policy'

The University Grants Committee "strategy" letter was no substitute for the proper development of a national higher education policy, Dr David Harrison, vice chancellor of Keele University, said this week.

He described the present situation as "extraordinary". Since 1980/81 a 7 per cent fall in the number of first-year home students, following UGC advice, had coincided with the nation spending over £100m on encouraging academics to retire early. On the other hand there had been a 25 per cent increase in first year home students in the public sector.

He told the university court that he doubted whether any money had been saved at all, and said a new Robbins-type commission was overdue.

Dr Harrison said the 1981 cuts were also made when the Government was urging a greater emphasis on science and technology. At Keele he had tried to bring about this kind of shift, but because these subjects were more expensive, this was extremely difficult to do when resources were falling sharply.

He said external funding was vital for the university's research, because the recurrent grant would increasingly be influenced by the 'success of a university's self-help.

Keele had set a target of 10 per cent from external sources. "I do not believe privatization on a substantially larger scale is either desirable in principle or possible in practice, assuming that the country wants universities to continue to offer a reasonable spread of disciplines to survive," Dr Harrison said.

Handling of college sale shocks MPs

by Olga Wojtas
Scottish Correspondent

The House of Commons Accounts Committee says it is astonished by the way the Scottish Education Department handled the sale of Hamilton College of Education, axed in 1981.

The committee says in a report published this week that it decided to investigate the sale because of the public disquiet when Hamilton was sold for £680,000 – "a very small fraction of the probable current replacement cost of £20m."

It criticizes the SED and by implication, Mr Alex Fletcher, former Scottish Office minister for industry and education, for its failure to market the property adequately.

The decision to axe Hamilton was highly controversial, and there were allegations that the Government rushed the sale to avoid the political embarrassment of the college lying empty.

The committee reports that the SED ignored guidelines laid down in 1980 for the sale of public property, after the purchasers of a Glasgow hospital had made substantial profits by developing the site.

The department consulted Scotland's chief valuer and the Solicitor's Office as "strongly recommended" and was advised to appoint estate agents.

However, the committee was astonished to find that the SED approved the sale being carried out by Jordanhill College of Education's solicitors without waiting for the chief valuer's advice. It then made no attempts either to change their decision or discuss the sale with the valuer.

The committee said it was clear that potential buyers were not falling over themselves to bid for the specialized property, and the price obtained would depend crucially on energetic and skilful marketing.

The college was never advertised in any estates journal – only in two issues of *The Times*, *The Times Educational Supplement*, *The Scotsman* and the *Glasgow Herald*, shortly before and after the Christmas and New Year holidays.

Mr George Park MP, one committee member, commented during the hearings that he was puzzled Hamilton had been advertised over a period "when a lot of people in Scotland would hardly have got over their headache".

This limited advertising had produced only four unattractive offers, says the committee. But the SED again rejected advice to use estate agents and decided to sell at a "bottom of the market price" without telling other public bodies of the low price or fully explaining the circumstances to the Treasury.

The committee agrees there can be no certainty what price the college would have raised had estate agents been used. But it says that the SED's casual approach failed to ensure everything possible was done to market the college adequately.

It recommends that Scottish Office departments follow the guidelines on sales "to maximize the selling price" and also recommends that the Treasury issue similar instructions in England and Wales.

Projected student numbers disagree over sex ratio

An independent review of projections for student numbers for the remainder of the century has been launched parallel to the Government's own reassessment.

The most glaring difference between the Department of Education and Science and its critics is over the sex distribution of future students.

While many observers believe that the gradual growth in the proportion of female students will probably gather pace, the DES has assumed that it will not. Its revised figures, promised after intervention by the vice chancellors, the Royal Society and the Association of University Teachers, are expected by Easter.

By then a working party set up by the Royal Statistical Society and the Institute of Statisticians will have completed its examination of the assumptions underlying the competing projections.

The working party chairman, Professor Fred Smith from Southampton University, said: "Any projection is built on assumptions and we will be analysing them, and will have to make judments on whether we think they are reasonable or not."

The exercise is completely independent of the DES's own reassessment, although ministers are unlikely to reject out of hand the findings of the two most learned societies in the field.

In its response to the University Grants Committee's strategy letter, the National Union of Students also enters the debate over women's increased participation. It expresses confidence that the demand from women will continue to grow faster than the overall demand for higher education unless constraints are placed on courses which are more attractive to women. Parity between the sexes alone would increase total full-time student numbers by about one eighth.

Instead it wants new policies to encourage more people into higher education by increasing the numbers staying on at school, encouraging more people to return to post-school education either full or part-time, and making universities and colleges more attractive to potential students.

The NUS is keen to see external validation of universities on the Council for National Academic Awards model and an improvement in the quality of teaching through training for lecturers.

In talks with the UGC last week NUS leaders were encouraged by the emergence of an apparent readiness to consider reinforcing the system of external examiners as at least a step on the road to enforcing uniform standards. However, this would not meet their demands for long-term monitoring of courses.

The organization has declared its opposition to the idea of two-year degrees and the binary division between the universities and the public sector.

Council agrees to reduce poly grant

Oxfordshire County Council this week agreed as expected to reduce its contribution to Oxford Polytechnic from £695,000 in 1984/5 to £500,000 in 1985/6. The decision will mean a reduction of £240,000 at current prices.

Dr Brian Tonge, the polytechnic's director, said that if the National Advisory Body's pooling allocation did not compensate for the reduction in the council's topping up level, he foresaw the need for six voluntary redundancies.

Poly admissions costs shared

by Karen Gold

The Committee of Directors of Polytechnics has asked each polytechnic to pay £12,000 towards setting up the central admissions scheme intended to start next year.

The CDP has written to all the directors, saying it has decided that the £625,355 initial cost of the scheme, less £210,000 contributed by the Department of Education and Science, should be borne equally by each of the participating institutions.

The letter gives three reasons for the equal split, rather than dividing it by institutional size or number of degree courses. They are: that the cost is for the establishment, not the running of the scheme; that each participating institution is equally committed; and that a different formula would be difficult to devise in time for the 1985 entry.

The 30 polytechnic scheme is likely to cost less than £625,355 because some of the paper work has already been done by the CDP. Hence the sum of £12,000 per polytechnic, split over two years, only totalling £360,000 in all.

If money is forthcoming from another source, the institutions will have to pay less, the letter says. But the local education authorities, which would be the most likely source, have expressed doubts over the exclusion of major colleges and are unlikely to support it unless assured of the colleges' inclusion.

"The polytechnic scheme to take the entrants is being run by the Universities' Central Council on Admissions parallel to the university scheme, with a condition from the DES that the two schemes are compatible.

According to the CDP letter, the staff for the polytechnic scheme will have to be appointed by July this year, a legal framework established and management, administrative, finance and staffing structure set up. The CDP plans to establish a company limited by guarantee, with premises in Cheltenham and charitable status on the same lines as UCCA's. The CDP plans to find premises and recruit staff immediately.

Laminating is one of the conservation techniques used by the library to help repair and preserve documents.

Rising damp, rising shelves, rising costs

British Library plans to halt the deterioration of its entire collections by the end of this century have had to be shelved in spite of increased expenditure on conservation, the library's annual report published yesterday says.

The 1982/83 report points out that this is one of the four major problems being faced, together with lack of funds for acquisitions, shortage of space and the uncertain impact of new technology.

The library stresses that the present buildings cannot be modified to control the environment and the collections are suffering. The library is not due to move to its new building in St Pancras until the end of the 1980s at the earliest.

"In consequence, conservation costs are now running close to acquisition costs – this was over £4m or 8.5 per cent of a total expenditure of over £51m for 1982/83 as compared to 12.3 per cent for acquisitions – but the hope that even this rate of expenditure could enable the backlog of work to be removed by the end of this century cannot be fulfilled," the report says.

It adds that other means of containing this problem have been thoroughly explored but that they have all failed on grounds of expense or durability of the product. The library has however spent some £49,000 on research projects in conservation, one of which was conducted by Aston University in Birmingham.

The library's second problem has been the present financial constraints. Its grant for 1982/83 was increased by 6 per cent but its earnings rose by only 1.3 per cent, well below what had been estimated.

"As a result in spite of a selective acquisitions policy, the library has been unable to purchase 'heritage items', the market incidence and value of which are quite unpredictable. An example of such items is Malory's *Morte d'Arthur* which the library acquired in 1976," the report says.

But the report adds that even its selective acquisitions policy has not prevented the annual addition of occupied shelving rising to 16 kilometres. This means that despite every effort to achieve economies, accommodation charges will over a period take an increasing proportion of the library's expenditure.

Another problem is the uncertain impact of new technology. It says the full effects for libraries, management, publishing, information storage and retrieval, facsimile transmission, conservation and so forth cannot be fully foreseen.

But, the report adds, the library is nevertheless planning for enhanced services based on the most up-to-date technology. In addition, the research and development department aims to keep abreast of and evaluate such developments and where possible to improve on them and also to educate librarians and users alike.

The British Library Tenth annual report 1982/83 available from Press and Public Relations, the British Library, 2 Sheraton Street, London W1, £1.25.

Unions fight agricultural work transfer

Research units in Agricultural and Food Research Council institutes are being closed and work transferred to university groups, the AFRC union claim.

In their response to the council's corporate plan, which foreshadows large-scale job losses in the agricultural research service, the unions say the council "should not decide in advance to spend money at universities when every indication is that there are few projects which demand such university input and which cannot be done in-house".

The unions take particular exception to the closure of the structural chemistry unit at the Rothamsted Experimental Station, and allege that work formerly done there is now passing to universities. Their paper points to grants awarded to Oxford University and Bristol University for X-ray crystallography studies on enzymes and work on collagen.

Ironically, the Oxford work is being done by a group under Sir David Phillips, chairman of the Advisory Board for the Research Councils and pioneer of crystallographic studies of proteins. The council's position is that this work could not be done anywhere else in the UK.

The Bristol grant, worth £117,000, is part of a tie-up between the university and the nearby Meat Research Institute. The council is setting up a series of university research groups tied to institute work to meet criticisms that its own establishments have too few outside connexions, and the Bristol group is the latest of these.

However, the union response to the corporate plan maintains that strategic research would be adversely affected by transfer of work to universities, and so would spin-off to private industry.

Doubts over travel plans

Fears that the Government's plans to end repayment of student travel costs will restrict the choice of place of study and may cause hardship to a minority have been expressed by the Association of Metropolitan Authorities.

In its response to ministers' plans to make a flat rate payment to cover travel costs of either £110 to all students or a two-band scale of £100 for those living away from home and £160 for home students, the AMA says it would prefer the former but that there must be a safety net to take care of cases of genuine hardship.

The association is also wary about ministers' plans to implement the new arrangements from the start of the coming academic year. It says that a longer phasing in period is needed – at least to protect students currently on course.

In its response, the National Union of Students says it is unfair and unreasonable to begin in 1984/85. "Continuing students will not be able to choose for themselves how best to arrange their affairs as their travel patterns will have been established under existing arrangements," NUS says.

● Postgraduate fees for home and European Economic Community students are to rise by 5 per cent from £1,494 in the current year to £1,569 in 1984/85, education secretary Sir Keith

Tight security for Thatcher visit to Warwick

Tight security is expected when the Prime Minister visits Warwick University tomorrow to open a £1.1 billion "incubator" building for small high technology companies on the university's science park.

The authorities are likely to take no chances despite the agreement between the university and the student union last [illegible] a visit last [illegible] Joseph, Secretary of State for Education and Science [illegible]

Under the agreement demonstrations can only be held if endorsed by a two-thirds majority at a general meeting and if seven days' notice has been given. Failure to comply risks the withholding of up to £20,000 of the union's funds.

A call from the union executive for a peaceful but vociferous demonstration [illegible] by the required [illegible] 100 student [illegible] hand to police [illegible] the Rayleigh [illegible]

But at an emergency union meeting yesterday the Socialist Workers Student Society was expected to push for a demonstration totally independent of the agreement with the university.

Its leaders claim it is no coincidence that the first political figure to visit the campus after the ratification of the agreement is the prime minister.

The centre has been funded by Barclays Bank as part of its support for high technology innovation. In just three weeks since the 24,000 square foot building was handed over, 11 companies have moved in and a further three are expected within the month.

The demonstration will be the focus at Warwick for activity by students in support of their demand for a new deal. Up to 100 institutions were expected to be involved in local activity over the past two days ranging from walkouts in Scotland to library work-ins, rallies and other action.

The campaign is intended to build up to a demonstration in London on

Inner London board recommended

by Karen Gold

Inner London should have its own permanent advanced further education board to deal with planning, funding and validation of all the capital's colleges and polytechnics, recommends a paper from the National Association of Teachers in Further and Higher Education.

The paper is the lecturers' union's response to the Inner London Education Authority's current higher education review: a single exercise due to announce its conclusions next month.

But the Natfhe paper says that planning "is not a once-and-for-all-time process. How will plans be made in future, how will self-review continue, how will decisions be carried forward?" the paper asks.

It recommends a three-tier board, the top tier of which would advise ILEA's further and higher education sub-committee on "the disposition of courses, resources and all matters of standards", on both poolable and non-poolable courses.

Through the board, ILEA would negotiate a single central agreement with the Council for National Academic Awards on partnership in validation, rather than leaving the five polytechnics and some of the colleges to negotiate their own individual ones.

Other professional and validating bodies could be dealt with in the same way, the paper says. The effect would be to draw together validation and resourcing issues for the first time, to increase cooperation between the authority's institutions, and to ensure that the institutions responded to the authority's policies such as increased access and equal opportunities.

The paper points out that, with the ILEA review recommending London polytechnics should keep their corporate status, ILEA may need other controls over them: "Put baldly, if the polytechnics remain autonomous *and* ILEA is rendered less able to 'top up' the block grant from the rates, the polytechnics will be less ready, in our view, to follow progressive educational policies of the kind advocated by Natfhe," the paper says.

"The question must arise: how can they be bound into an accountable system which properly relates to other ILEA provision?"

"The top tier of the board recommended by Natfhe would comprise representatives of institutions in proportion to their size, plus institutions without any advanced work; ILEA members, trades union representatives, and representatives of the National Advisory Body, the CNAA and the ILEA inspectorate. That tier would be advised by two others: a set of subject specialist groups to advise on course approvals in validation, policy on programme areas and resourcing of programme areas; and a consortium of polytechnics and college academic boards plus college inspectors and community groups, to advise on geographical provision and staff and student matters.

The paper also comments on options being canvassed by ILEA in its review: Natfhe is not sure ILEA has grasped the implications of the proposed merger between City of London Polytechnic and the City University, the paper says, particularly difficulties over financing and a charter.

●The Inner London Education Authority should be directly elected and extended to cover the whole greater London area, according to a paper by the Inner London joint committee of the Association of Polytechnic Teachers. The paper, in response to the Government white paper *Streamlining the Cities*, which proposes abolition of the Greater London Council and an ILEA comprising seconded members from Inner London boroughs, says the committee regrets the proposal to replace the ILEA by a body "which could well be less effective".

Group to defend primary BEd

by Patricia Santinelli

Polytechnic and college course leaders in nine institutions have set up a group to defend generalist primary BEd courses against any misinterpretation by the new Council for the Accreditation of Teacher Education when it is established.

The informal group was initiated by Mr John Hallett of Trent Polytechnic School of Education because he was concerned that the first draft criteria for accreditation was so general that such courses, not based on a main subject, would be open to misinterpretation by the council. This view was later privately confirmed by a senior member of Her Majesty's Inspectorate.

Basically the group want to gather evidence that generalist primary BEd courses which are fairly recent are on the right path. The courses have been designed to move away from the tradition of a main subject towards a broader curriculum and very much in response to the needs of the teaching profession.

The group which has only had two meetings at Leeds Polytechnic is likely to expand fast, as a result of the Council for National Academic Awards undergraduate initial training panel's request that other institutions with similar degrees be included in the initiative.

Mr John Hallett says that originally it was intended to be a group of five but as a result of interest it grew faster than envisaged, and all institutions with a clear commitment to such courses were welcome. He anticipates the original number will double or treble.

At the moment the group comprises course leaders from the polytechnics of Leeds, Newcastle, Sunderland, Teesside and Trent as well as Charlotte Mason, Edgehill, Humberside and Nene Colleges.

As a first step, the group is responding to the Government proposals for CATE and the new criteria. It does not plan to contest the criteria, so much as to give the council guidance on interpretation where prudence will have to be exercised.

It is also critical of the model of teaching and teacher training which lies behind the criteria. It says this is not suited to primary teaching, representing far more an amalgam of secondary teaching and training.

The group is also undertaking a research project to find out whether teachers, local education authorities and the inspectorate consider that generalist training is an effective introduction to primary teaching.

MPs asked to safeguard exam data

by Jon Turney
Science Correspondent

The Committee of Vice Chancellors and Principals wants an amendment to the Government's new Data Protection Bill to stop students gaining access to exam marks.

The Department of Education and Science has told the vice chancellors the Government will not make such an amendment and the CVCP's secretary-general, Mr Brian Taylor has now written to members of the House of Commons committee considering the bill to try to insert an amendment at the committee stage.

The bill will require holders of personal data to provide information to the people concerned within 40 days of a request. The CVCP has joined forces with the Committee of Directors of Polytechnics and the Joint Matriculation Board to alter these provisions for exam data.

The bill's main purpose is to enable the UK to ratify the European Convention on Data Protection, which means it must guarantee rights of access to personal data. But Mr Taylor's letter to the MPs says release of raw exam grades "would not only lead to confusion on the part of the individual student but would also undermine the authority of examiners' boards."

The CVCP's concern is that raw exam grades may be adjusted to take account of personal factors and other aspects of a student's performance. They fear this could be made more difficult if students can demand to see computerized records.

Although Home Office and DES ministers have declined to initiate an amendment to take account of this, they have indicated that the Government will consider any amendment put forward in committee.

Altogether now . . . Youth Training Scheme trainees put the finishing touches to the Yellow Submarine which will form the centrepiece of the Beatles Maze at Liverpool's International Garden Festival from next month. Still to receive a coat of yellow paint, the submarine is 51ft long and weighs 18 tons. It is being built at the British Shipbuilders (Training and Education and Safety) Ltd workshop at Monk's Ferry, Birkenhead.

Arafat to stand at Glasgow

The leader of the Palestine Liberation Organization, Mr Yasser Arafat, has been officially accepted as a candidate in Glasgow University's rectoral elections.

There are five other candidates in the election, to be held on March 5: author and former Tory MP Mr Jeffrey Archer, Liberal activist Mr Menzies Campbell QC, comedian Rikki Fulton, Glasgow's Lord Provost Dr Michael Kelly and Mr Matthew Lygate of the Scottish Workers' Republican Army, who recently finished a prison sentence for bank robbery.

Sir John Junor, editor of the *Sunday Express* and a Glasgow graduate, had his nomination declared invalid when it was discovered he had not signed his letter of consent personally.

Sex equality threatened, say women

Women trade unionists fear the Government's Youth Training Scheme is undermining progress towards sex equality at work.

Delegates to the TUC women's conference in Torquay next month will have a choice between outright opposition to the YTS, as championed by the National Graphical Association, and a reformist line advocated by the Confederation of Health Service Employees.

The NGA's criticism is a continuation of the union's uncompromisingly anti-YTS line which was rejected by the TUC in September. It dismisses the YTS as a cosmetic exercise that simultaneously encourages job substitution and weakens trade union power.

If the NGA's call for withdrawal of support is endorsed in Torquay, it is likely to influence the mainstream of TUC thinking.

But the general council is more likely to be swayed by the criticisms lodged by the traditionally-moderate Cohse.

Based on its experience of the first year of the YTS, Cohse warns that the scheme lacks adequate safeguards against job substitution – the replacement of full-time adult workers by trainees on much lower training allowances.

Its Torquay motion expresses the fear that it will be women's jobs most at risk and notes the continuing failure to secure an agreed operational definition of "additionality" to stop job substitution.

But it falls short of a demand for withdrawal and merely seeks a higher profile from representatives on area manpower boards, the TUC's women's advisory committee and the general council.

MSC will respond to training needs, says King

Training must be firmly geared to the jobs market with people being trained specifically for areas in which there are skill shortages, Mr Tom King, Secretary of State for Employment, said last week.

Defending the recent White Paper, *Training for Jobs*, which proposed expanding the role of the Manpower Services Commission in non-advanced training areas, Mr King said as a former local government minister he entirely understood the fears of local education authorities, who saw the move as a victory for centralization.

Mr King was addressing a conference on skill training organized by the Industrial Society. There was an urgent need to respond to skill shortages – some of them in vital areas of the British economy, he maintained.

Better liaison was required between education services and the industrial sector. Through its tripartite structure the MSC was equipped to respond to local training needs, and the proposed extension of MSC involvement in training, contained in the White Paper, was a "relatively modest proposal" to ensure the closest collaboration.

Ultimately, said Mr King, it would be the customer and not the supplier of training who controlled provision. "The Government's decision to give the Manpower Services Commission greater responsibility for part-basing non-advanced further education is a direct attempt to try and ensure that the training which we support is closely geared to industry's needs. The more we can do that, the more cost-effective training becomes and the better the chance that employers will take the right training decisions in the interests of all concerned."

On distance learning techniques Mr King felt the Open University and Open Tech programmes had demonstrated the beginning of a revolution in approaches to training.

"All sorts of people will have access to training in specific skills."

UNION VIEW

Paranoia over the rates

I think there is a reasonable consensus among the people of Britain that when they elect a government they expect it to be responsible for providing public services such as education in the most efficient and effective fashion. If I am correct then surely the current Government must be guilty of callous irresponsibility over recent years.

Its arrogant and antagonistic attitude towards the functioning and existence of local councils serves to illustrate the point. Successive cuts in the amount of taxpayers' money which goes to provide for local services have forced authorities to impose an ever heavier burden upon the ratepayer, and the domestic ratepayer in particular.

In its manic desire to cut public services the Government has presumably hoped that higher rates will induce people to throw out councils committed to keeping those services going. What a pity that democracy hasn't worked out that way. Ratepayers have been prepared to pay for the maintenance of high quality services and in particular have expressed an overwhelming desire for more not less money to be spent on education.

Never mind, thinks Patrick Jenkin, if the people won't comply we shall have to do it for them. Now the rates bill proposes making illegal the 350-year-old right of local councils to raise revenue locally through the rates. The effect would be catastrophic. In the education service tens of thousands of people would lose their jobs, discretionary awards for students are likely to disappear altogether and authorities would be powerless to compensate for central government cuts in higher education college budgets.

The need for all of these powers which the Secretary of State requires is based on this spurious assertion that the local authority spending is somehow out of control. In fact local authority spending has fallen both as a percentage of gross domestic product and as a percentage of public spending more generally. On its own terms central government expenditure is more out of control than that of local councils. What a shame it spends it on the wrong things.

So what then is the real motivation? Well no surprises here. These things are all part of a trend. In reality, it seems that this Government is developing a rapid paranoia about dissent. The fact that the selective powers will apply almost exclusively to Labour authorities is surely not coincidental with the fact that they provide an effective forum for the expression of political dissent and opposition to the Government's policies. The abolition proposals are even more of a blatant political manoeuvre.

How unsure of itself the Government must be to be so terrified of democratic opposition to its dynasty. The trend can be identified also in the increased interference by central government in dictating the control of education. It just would not do to have a higher education system geared towards a critical discourse of society's problems and Government policy. We cannot have people thinking for themselves, they might end up disagreeing with us.

These insidious proposals which have rightly attracted so much public opposition must be defeated. It is the responsibility of all of us inside the education service and out who believe in democracy to ensure that they are.

Tommy Sheppard

The author is vice-president education of the National Union of Students.

overseas news

Reagan to be a Stanford museum piece

from Charlotte Beyers

PALO ALTO

After months of bickering Stanford University has finally made peace with the White House and agreed "in principle" to accept the Ronald Reagan Presidential Library and Museum on campus.

The words "in principle" mean that both sides must still decide the site of the library, the architectural style and, most important, what will happen to the controversial Reagan Center for Public Affairs.

Mr Donald Kennedy, Stanford's president, said that the university's board of trustees approved the project because the White House finally capitulated. Reagan is offering his presidential papers to Stanford with no strings attached.

"We are pleased the president's papers will come to our campus. The library will be a valuable adjunct to the Hoover," Kennedy said.

The fate of the Center for Public Affairs is still uncertain. Earlier the White House had wanted the library to be part of a package tied to the public affairs centre, which would be controlled by the Hoover Institution. The Hoover is a conservative think tank and lists Reagan as an honorary fellow.

Stanford insisted that the centre would be run by the university or not at all. Stanford won the battle. Presidential counsellor Edwin Meese wrote conceding that the university could have the library and museum and that the policy centre would be a separate matter.

To clarify this letter or perhaps motivated by the shock of victory, Donald Kennedy and William Kimball, head of Stanford's board of trustees, wrote to the White House requesting more information. Stanford received a letter saying the package deal was off and that the library was Stanford's.

The library would be under the control of the National Archives. Preliminary cost estimates indicate that about $65m in private gift support would be required, including $40 to $45m for construction and about $20m for the public affairs centre.

Round two will concern the public affairs centre. At a press conference held recently, Donald Kennedy did not rule out the possibility that it might not come about at all.

Cure for rural health crisis

by Thomas Land

Brazil will soon launch a daring experiment in medical education which seeks to erect universities without walls whose graduates are prepared to serve the neglected rural areas.

The project enjoys the enthusiastic support of the United Nations World Health Organization (WHO). It has also attracted the intense interest of educational planners around the globe's hungry belt. The WHO is nudging them to rethink their budgets and to introduce drastic economics in the training of highly qualified health professionals. Brazil intends to do just that.

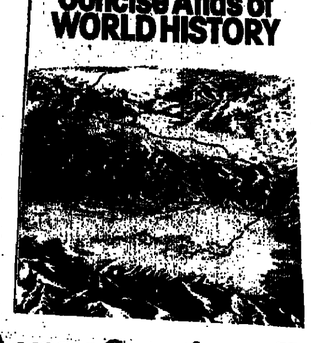
Its project is described in the current issue of *World Health Forum* by Gladstone Rodrigues da Cunha Filho, the higher education secretary at the ministry of education in Brasilia. "The traditional student/professor model of teaching will be discarded "in favour of one in which the student is actively involved with, and learning from, the community from the beginning of his training," he says.

"Such a practical learning experience will provide students with invaluable insight into the social and health problems of the community and make them better able to adapt and respond to rapidly changing social needs."

He explains: "It is easy for a training course organized on a formal basis and conducted within a training institution gradually to lose touch with reality." Brazil would therefore integrate university health science schools with the national health care service so that "most of the teaching should be carried out in general hospitals, outpatient clinics, health centres and rural posts and at family and community levels".

Brazil's timely educational reforms are in line with the conclusions of a discussion paper just published by the WHO. This argues that the developing countries may be putting the lives of millions at risk by spending up to 80 per cent of their health budgets on doctors – whose training tends to divorce them from the communities they should serve.

The WHO argues that the major health problems of the hungry world could be best solved through primary health care essentially concerned with the prevention of disease.



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'No nudes' is not such good news

Drawing from the nude does not constitute obscenity, comrade Qian Shaowu, Peking Radio's resident expert on spiritual pollution decided recently. Properly conducted life classes in art schools are, on the contrary, indispensable. The fact that some rascals use nude studies for other purposes and violate discipline in drawing from the nude should not affect one's attitude to the scientific studies of human bodies and their movement which is an essential foundation for the art of realism.

The question of nude studies, said Qian, has long been a matter for ideological debate. In the 1930s, there was an intense struggle against the warlord Sun Quansang, which resulted in a victory for the pro-nude lobby. Socialism, he said, provided the conditions in which the matter could be settled scientifically, and in 1964, Chairman Mao formally pronounced in favour of life classes. During the cultural revolution, however, drawing from the nude was considered a hot bed for cultivating young revisionist successors. Following the fall of the Gang of Four, the education office of the Ministry of Culture issued a circular advocating the reintroduction of life classes in art schools.

The launching by the central committee last autumn of a drive against spiritual pollution (alleged traces in Chinese society of Western pornography and permissiveness) raised the question of nude models once again, although Qian assured his listeners, the two matters are in no way connected.

Nevertheless, he urged that in the present situation drawing from the nude should be restricted to specialized academies or units under the direction of properly qualified teachers. What these special circumstances are, he did not specify. Recent scandals, however, which involved the sons of several high party officials, who allegedly took part in nude dancing parties and re-photographed and circulated centre folds from *Playboy*, resulted in the execution of the accused on the formal charge of rape.

Pathologist wins prestige rectorship

by Sarah Jane Evans

The rector of Spain's largest university was elected this month to see through the reforms outlined in the new Universities Act. To cries of "Fascists out of the university", "No dictators" and clenched fists from some of the voting delegates, Amador Schuller Pérez, professor of pathology in the medical faculty, was declared the winner of the seven-man contest at Madrid's Complutense University.

This is a key appointment because the Complutense University by its size is very influential. The decisions the director takes now on how to interpret the Act will have a spin-off effect on tertiary education as a whole.

The Bill on university reform was one of the earlier pieces of legislation introduced by the socialist administration of Prime Minister Felipe González after it came to power just over a year ago.

An earlier Bill on university autonomy (*Ley Orgánica de Autonomia Universitaria*) proposed by the previous centrist government had foundered on attacks from academics and from the left. The left criticized it for its encouragement of private universities and for raising the possibility of higher student fees.

University teachers on the establishment objected to the proposal that non-tenured staff should be given tenure without having to take the hitherto usual competitive examinations. And the autonomous regions complained that the law offered no autonomy at all – that it actually took away power from the regions to administer their own education.

Under the new Act, the universities are independent but linked to their autonomous region. The rectors are chosen by a council of staff and students and this new administration is then free to take control over a greatly increased range of powers.

The universities now become independent entities administering their own budgets, negotiating research contracts with outside bodies and producing their own syllabuses and courses.

During the Franco years, researchers in Spain's universities had very limited contacts with their colleagues round the world. The freedoms allowed under the new Act have been widely welcomed in terms of the academic and financial benefits they will bring.

The Act also brought in some changes to teacher's conditions. The much-criticized competitive *oposiciones* run by the ministry for all staff appointments have been abolished and replaced by a much more reasonable system of public examination of candidates.

The number of grades of teacher has been reduced to four, doing away with the previous army of unregistered staff providing a kind of cheap labour. With these improvements, staff are also expected to be more committed to their jobs. The amount of time that can be spent "moonlighting" on other jobs is to be strictly controlled.

There were seven candidates for the rectorship of the Complutense University which, by its size and resources, has an influence on policy-making throughout higher education. All the candidates are professors from the university - two lawyers, an engineer, an economist, two social scientists and a professor of medicine.

Their manifestos, in greater or lesser degree, express their desires to implement the spirit of the Act. They all draw attention to the need to improve the quality of the teaching and support available to staff.

The new rector is number 352 in the list of rectors which was begun in 1508 and was chosen by a council of 1,000. He has less than a year to introduce the new statutes of the university.

Professor Schuller, who is president of the Spanish Internal Medicine Society, runs the most oversubscribed faculty in Spain. Though the principle of open access to university education for all qualified applicants is the rule in Spain, the Complutense operates a quota system in its medical faculty. The professor has declared himself in favour of restricted entry procedures for other faculties in a university which is notorious for overcrowding.

In his manifesto he committed himself to restructuring the staff appointment system, which currently relies heavily on staff on short term contracts. Professor Schuller defended himself against the angry cries of his opponents with the words, "I am a liberal". It is clear that he will not introduce any major innovations under the freedom available to him in the new Act.

Languages hit an all-time low in the US

from P. E. Burke

CHICAGO

Foreign language studies both at college and high school levels in the US are at their lowest ebb. There are signs of increasing interest, but not in Romance languages which have been traditionally taught but in what has been described as "exotic", "world-strategic" and "ethnic" languages.

During the past decade there have been significant increases in colleges for the following languages: Arabic (160 per cent increase), Chinese (82 per cent), Japanese (74 per cent), and with much smaller numbers Yiddish (276 per cent), Polish (73 per cent) and Swedish (38 per cent).

Richard Brod, director of the foreign-language programme of the Chicago-based Modern Language Association of America said: "These figures are only the tip of the iceberg. They are for accredited (college) programmes, but ethnic language courses are also taught at community schools."

Until 1917, German was the language most taught at all levels in US education. It is now barely holding third place above Italian. German was succeeded by French, which has now been deposed from first position by Spanish.

Rather than returning to the Romance languages, US college students, according to Mr Brod, are taking up the "challenge" of Russian and other Slav languages, and also Arabic and Indonesian – "the alphabets and writing systems are also a challenge."

Statistics recently compiled by the Modern Language Association, reveal that the study of foreign languages is being taught in only 15 per cent of high schools. Only 4 per cent of high school leavers have completed more than two years of foreign language study.

American colleges began to drop both entrance and graduation language requirements in the mid-1960s. Some 90 per cent of all US colleges had language requirements until then and these had been reduced to 53 per cent by 1974.

The black pressure groups say that the language requirement at college level is "most odious" for both blacks and struggling students. Colleges have noted that students switch from courses where there are language requirements.

Paul Griffith, educational consultant with the Illinois Board of Education said: "There are a lot of good arguments for teaching other languages. We ought to begin to look at them for international reasons, our economic and political well-being and ethnic health."

overseas news

Lack of research increases health costs

from E. Patrick McQuaid

CAMBRIDGE, MASS

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But the governor, Mr A. P. Sharma, decided to go strictly by the number of votes polled in the university's elections for the post. Thanks to a miscalculation by the Marxists, Bhattacharya got more votes than Poddar and was appointed. Immediately, there was a hue and cry.

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More closures follow clashes in Pakistan

from Hasan Akhtar

ISLAMABAD

Authorities in Karachi have closed down two of the city's colleges after a week of student agitation against the banning of student unions and organizations in all colleges and universities in Sind. Similar prohibitory orders apply to colleges and universities in Pakistan's other three provinces.

In Karachi and Lahore a number of students have also been expelled from the university and colleges for leading demonstrations which resulted in violent clashes with police. About 50 students have been expelled and 200 students have been arrested.

Dr. Mohammad Afzal, Pakistan's education minister, said that about 15 people had been killed in the last few years on various campuses and lawlessness and destruction of property had risen.

He announced he had called a nationwide student conference in March to consider and devise a plan of action to promote "healthy activities" at the campus.

Recession catches up on graduates

from Jessica Kuper

LEIDEN

Dutch graduates seemed to be immune to unemployment until latest figures revealed that 15,000 university and 40,000 technical school graduates had been out of work for more than a year.

This represents about 10 per cent of all graduates. Yet in December 1972 there were only 1,500 registered as unemployed.

The crisis year was 1982, when a record wave of graduates came onto the market at the severest point of the recession. The economic crisis now seems to be over and the industrial sector is expanding, but there is little hope for improvement in areas which depend on government spending – teaching, medicine, dentistry and the civil service.

Yet roughly three quarters of all students are being trained for jobs which require government funding. Today there are 1,600 unemployed doctors, 1,400 law graduates, 1,200 language and literature graduates and 230 dentists.

Mr Deetman, the minister of education, has suggested that student entry should be restricted in certain fields, but predictions have in the past proved to be a poor guide.

Students themselves are, however, adapting to the market. School headteachers report that they are inundated with questions about which line of study is likely to lead to a decent job.

A study of schoo-leavers by the Economics Institute of the University of Nijmegen shows that boys especially are likely to adjust their study plans to improve their employment prospects. Students already enrolled in the universities are selecting the most marketable specialists.

Within psychology for example, more students are opting for organizational and industrial psychology. Clinical psychology – a field in which there is high unemployment – is currently starved of students.

Graduates still have a better job record than non-graduates. The 10 per cent level of graduate unemployment is better than the national level, which is over 17 per cent.

On the other hand, graduates are being increasingly obliged to accept jobs for which they are over qualified. There are innumerable stories of doctors starting take-away restaurants, psychotherapists running coffee-shops, historians designing clothes, anthropologists dealing in Japanese prints and economists importing mosquito nets from Bangladesh.

UNION VIEW

Taking the federal role for granted

This is the time of year in the United States when the president sends his budget to Congress. We now know that President Reagan, in spite of all of the rhetoric about excellence in education, has proposed modest cuts in federal aid to higher education in the academic year 1985–86.

It is important to understand that the Congress can only appropriate funds up to limits allowed by legislation authorizing programmes. The relationship between authorizing legislation and appropriations is that between establishing programmes and actually funding them.

In 1984, the Congress may begin to consider reauthorizing the Higher Education Act of 1965 which establishes the federal financial role in American higher education. Although the current legislation does not expire until 1985, Congressman Paul Simon, Democrat from Illinois, the chairman of the House of Representatives postsecondary subcommittee, has indicated that he expects to hold hearings on reauthorization of the Higher Education Act this spring.

Congressman Simon has circulated for comment an interesting memo outlining his ideas for reauthorizing legislation to govern the federal role for the rest of the 1980s. The major title of the legislation presently in place provides federal student aid programmes through grants, loans and money for work/study jobs on campus. The current programmes are complex and represent a compromise between public and private institutions.

Congressman Simon wishes to make the grants an entitlement for all needy students. Such an entitlement programme would mean that the president and Congress would have to fund the grants for all needy students who met legislative standards.

His formulation would allow the funding up to 75 per cent of the tuition charges. There would then be an additional specified allowance to cover non-tuition, school-related expenses.

This formulation represents a compromise between public and private institutions in that the entitlement character would help public colleges and the fact that there is no cap on tuition charges would help the private institutions.

Another innovation in the Simon plan is the development of a new programme of endowment challenge grants to institutions which may be tied to a commitment to hold back increases in tuition charges. The first year programme would authorize $500m, a significant new approach to federal aid to institutions which has been tried in regard to historically black, developing colleges, but has never been implemented on a large scale.

Although the endowment approach offers real promise, an attempt to use modest endowment grants to tie institutions to promises not to increase tuition is not especially constructive. Tuition increases are cost driven and only very substantial endowments can reduce the need for tuition increases to meet increasing costs. The endowment idea without the tie to tuition price control would be a step forward. It is time for the United States to take such a step.

Irving J. Spitzberg, Jr

The author is general secretary of the American Association of University Professors.

overseas news

Reagan to be a Stanford museum piece

from Charlotte Beyers

PALO ALTO

After months of bickering Stanford University has finally made peace with the White House and agreed "in principle" to accept the Ronald Reagan Presidential Library and Museum on campus.

The words "in principle" mean that both sides must still decide the site of the library, the architectural style and, most important, what will happen to the controversial Reagan Center for Public Affairs.

Mr Donald Kennedy, Stanford's president, said that the university's board of trustees approved the project because the White House finally capitulated. Reagan is offering his presidential papers to Stanford with no strings attached.

"We are pleased the president's papers will come to our campus. The library will be a valuable adjunct to the Hoover," Kennedy said.

The fate of the Center for Public Affairs is still uncertain. Earlier the White House had wanted the library to be part of a package tied to the public affairs centre, which would be controlled by the Hoover Institution. The Hoover is a conservative *think* tank and lists Reagan as an honorary fellow.

Stanford insisted that the centre would be run by the university or not at all. Stanford won the battle. Presidential counsellor Edwin Meese wrote conceding that the university could have the library and museum and that the policy centre would be a separate matter.

To clarify this letter or perhaps motivated by the shock of victory, Donald Kennedy and William Kimball, head of Stanford's board of trustees, wrote to the White House requesting more information. Stanford received a letter saying the package deal was off and that the library was Stanford's.

The library would be under the control of the National Archives. Preliminary cost estimates indicate that about $65m in private gift support would be required, including $40 to $45m for construction and about $20m for the public affairs centre.

Round two will concern the public affairs centre. At a press conference held recently, Donald Kennedy did not rule out the possibility that it might not come about at all.

Cure for rural health crisis

by Thomas Land

Brazil will soon launch a daring experiment in medical education which seeks to erect universities without walls whose graduates are prepared to serve the neglected rural areas.

The project enjoys the enthusiastic support of the United Nations World Health Organization (WHO). It has also attracted the intense interest of educational planners around the globe's hungry belt. The WHO is nudging them to rethink their budgets and to introduce drastic economies in the training of highly qualified health professionals. Brazil intends to do just that.

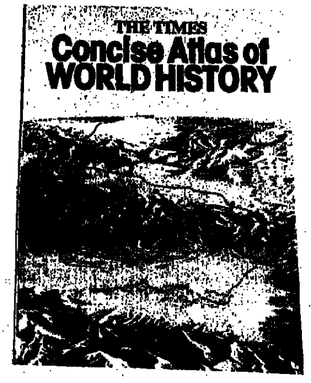
Its project is described in the current issue of *World Health Forum* by Gladstone Rodrigues da Cunha Filho, the higher education secretary at the ministry of education in Brasilia. "The traditional student/professor model of teaching will be discarded "in favour of one in which the student is actively involved with, and learning from, the community from the beginning of his training," he says.

"Such a practical learning experience will provide students with invaluable insight into the social and health problems of the community and make them better able to adapt and respond to rapidly changing social needs."

He explains: "It is easy for a training course organized on a formal basis and conducted within a training institution gradually to lose touch with reality." Brazil would therefore integrate university health science schools with the national health care service so that "most of the teaching should be carried out in general hospitals, outpatient clinics, health centres and rural posts and at family and community levels".

Brazil's timely educational reforms are in line with the conclusions of a discussion paper just published by the WHO. This argues that the developing countries may be putting the lives of millions at risk by spending up to 80 per cent of their health budgets on doctors – whose training tends to divorce them from the communities they should serve.

The WHO argues that the major health problems of the hungry world could be best solved through primary health care essentially concerned with the prevention of disease.



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'No nudes' is not such good news

Drawing from the nude does not constitute obscenity, comrade Qian Shaowu, Peking Radio's resident expert on spiritual pollution decided recently. Properly conducted life classes in art schools are, on the contrary, indispensable. The fact that some rascals use nude studies for other purposes and violate discipline in drawing from the nude should not affect one's attitude to the scientific studies of human bodies and their movement which is an essential foundation for the art of realism.

The question of nude studies, said Qian, has long been a matter for ideological debate. In the 1930s, there was an intense struggle against the warlord Sun Quansang, which resulted in a victory for the pro-nude lobby. Socialism, he said, provided the conditions in which the matter could be settled scientifically, and in 1964, Chairman Mao formally pronounced in favour of life classes. During the cultural revolution, however, drawing from the nude was considered a hot bed for cultivating young revisionist successors. Following the fall of the Gang of Four, the education office of the Ministry of Culture issued a circular advocating the reintroduction of life classes in art schools.

The launching by the central committee last autumn of a drive against spiritual pollution (alleged traces in Chinese society of Western pornography and permissiveness) raised the question of nude models once again, although Qian assured his listeners, that the two matters are in no way connected.

Nevertheless, he urged that in the present situation drawing from the nude should be restricted to specialized academies or units under the direction of properly qualified teachers. What these special circumstances are, he did not specify. Recent scandals, however, which involved the sons of several high party officials, who allegedly took part in nude dancing parties and re-photographed and circulated centre folds from *Playboy*, resulted in the execution of the accused on the formal charge of rape.

Pathologist wins prestige rectorship

by Sarah Jane Evans

The rector of Spain's largest university was elected this month to see through the reforms outlined in the new Universities Act. To cries of "Fascists out of the university", "No dictators" and clenched fists from some of the voting delegates, Amador Schuller Pérez, professor of pathology in the medical faculty, was declared the winner of the seven-man contest at Madrid's Complutense University.

This is a key appointment because the Complutense University by its size is very influential. The decisions the director takes now on how to interpret the Act will have a spin-off effect on tertiary education as a whole.

The Bill on university reform was one of the earlier pieces of legislation introduced by the socialist administration of Prime Minister Felipe González after it came to power just over a year ago.

An earlier Bill on university autonomy (*Ley Orgánica de Autonomia Universitaria*) proposed by the previous centrist government had foundered on attacks from academics and from the left. The left criticized it for its encouragement of private universities and for raising the possibility of higher student fees.

University teachers on the establishment objected to the proposal that non-tenured staff should be given tenure without having to take the hitherto usual competitive examinations. And the autonomous regions complained that the law offered no autonomy at all – that it actually took away power from the regions to administer their own education.

Under the new Act, the universities are independent but linked to their autonomous region. The rectors are chosen by a council of staff and students and this new administration is then free to take control over a greatly increased range of powers.

The universities now become independent entities administering their own budgets, negotiating research contracts with outside bodies and producing their own syllabuses and courses.

During the Franco years, researchers in Spain's universities had very limited contacts with their colleagues round the world. The freedoms allowed under the new Act have been widely welcomed in terms of the academic and financial benefits they will bring.

The Act also brought in some changes to teacher's conditions. The much-criticized competitive oppositions run by the ministry for all staff appointments have been abolished and replaced by a much more reasonable system of public examination of candidates.

The number of grades of teacher has been reduced to four, doing away with the previous army of unregistered staff providing a kind of cheap labour. With these improvements, staff are also expected to be more committed to their jobs. The amount of time that can be spent "moonlighting" on other jobs is to be strictly controlled.

There were seven candidates for the rectorship of the Complutense University which, by its size and resources, has an influence on policy-making throughout higher education. All the candidates are professors from the university – two lawyers, an engineer, an economist, two social scientists and a professor of medicine.

Their manifestos, in greater or lesser degree, express their desires to implement the spirit of the Act. They all draw attention to the need to improve the quality of the teaching and support available to staff.

The new rector is number 352 in the list of rectors which was begun in 1498 and was chosen by a council of 1,000. He has less than a year to introduce the new statutes of the university.

Professor Schuller, who is president of the Spanish Internal Medicine Society, runs the most oversubscribed faculty in Spain. Though the principle of open access to university education for all qualified applicants is the rule in Spain, the Complutense operates a quota system in its medical faculty. The professor has declared himself in favour of restricted entry procedures for other faculties in a university which is notorious for overcrowding.

In his manifesto he committed himself to restructuring the staff appointment system, which currently relies heavily on staff on short term contracts. Professor Schuller defended himself against the angry cries of his opponents with the words, "I am a liberal". It is clear that he will not introduce any major innovations under the freedom available to him in the new Act.

Languages hit an all-time low in the US

from P. E. Burke

CHICAGO

Foreign language studies both at college and high school levels in the US are at their lowest ebb. There are signs of increasing interest, but not in Romance languages which have been traditionally taught but in what has been described as "exotic", "world-strategic" and "ethnic" languages.

During the past decade there have been significant increases in colleges for the following languages: Arabic (160 per cent increase), Chinese (82 per cent), Japanese (74 per cent), and with much smaller numbers Yiddish (276 per cent), Polish (73 per cent) and Swedish (38 per cent).

Richard Brod, director of the foreign-language programme of the Chicago-based Modern Language Association of America said: "Those figures are only the tip of the iceberg. There are for accredited (college) programmes, but ethnic language courses are also taught at community schools."

Until 1917, German was the language most taught at all levels in US education. It is now barely holding third place above Italian. German was succeeded by French, which has now been deposed from first position by Spanish.

Rather than returning to the Romance languages, US college students, according to Mr Brod, are taking up the "challenge" of Russian and other Slav languages, and also Arabic and Indonesian – "the alphabets and writing systems are also a challenge."

Statistics recently compiled by the Modern Language Association, reveal that the study of foreign languages is being taught in only 15 per cent of high schools. Only 4 per cent of high school leavers have completed more than two years of foreign language study.

American colleges began to drop both entrance and graduation language requirements in the mid-1960s. Some 90 per cent of all US colleges had language requirements until then and these had been reduced to 33 per cent by 1974.

The black pressure groups say that the language requirement at college level is "most odious" for both black and struggling students. Colleges have noted that students switch from courses where there are language requirements.

Paul Griffith, educational consultant with the Illinois Board of Education said: "There are a lot of good arguments for teaching other languages. We ought to begin to look at them for international reasons, our economic and political well-being and ethnic health."

overseas news

Lack of research increases health costs

from E. Patrick McQuaid

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The Marxist have hit back by boycotting all functions attended by the governor or Congress (I) officials. The student wing, the Students' Federation of India, aided by some university employees, prevented the new vice chancellor from entering the campus on his first day. A student strike in a number of places followed.

More trouble lies ahead for Bhattacharya. In the 143-member senate, which lays down university policy, the Left Front government has 97 supporters, 71 of them CPM members. In the 35-member syndicate, which executes policy, the government has 25 members, 19 of them CPM. In the undergraduate council, which oversees the working of affiliated colleges, 10 members are Left Front men, eight of them CPM. Even the university non-teaching employees' union is controlled by the Marxists. A CPM senate member has warned: "There can be no question of unconditional cooperation."

More closures follow clashes in Pakistan

from Hasan Akhtar

ISLAMABAD

Authorities in Karachi have closed down two of the city's colleges after a week of student agitation against the banning of student unions and organizations in all colleges and universities in Sind. Similar prohibitory orders apply to colleges and universities in Pakistan's other three provinces.

In Karachi and Lahore a number of students have also been expelled from the university and colleges for leading demonstrations which resulted in violent clashes with police. About 30 students have been expelled and 200 students have been arrested.

Dr Mohammad Afzal, Pakistan's education minister, said that about 15 people had been killed in the last few years on various campuses and lawlessness and destruction of property had risen.

He announced he had called a nationwide student conference in March to consider and devise a plan of action to promote "healthy activities" at the campus.

Recession catches up on graduates

from Jessica Kuper

LEIDEN

Dutch graduates seemed to be immune to unemployment until latest figures revealed that 15,000 university and 40,000 technical school graduates had been out of work for more than a year.

This represents about 10 per cent of all graduates. Yet in December 1972 there were only 1,500 registered as unemployed.

The crisis year was 1982, when a record wave of graduates came onto the market at the severest point of the recession. The economic crisis now seems to be over and the industrial sector is expanding, but there is little hope for improvement in areas which depend on government spending – teaching, medicine, dentistry and the civil service.

Yet roughly three quarters of all students are being trained for jobs which require government funding. Today there are 1,600 unemployed doctors, 1,400 law graduates, 1,200 language and literature graduates and 230 dentists.

Mr Deetman, the minister of education, has suggested that student entry should be restricted in certain fields, but predictions have in the past proved to be a poor guide.

Students themselves are, however, adapting to the market. School headteachers report that they are inundated with questions about which line of study is likely to lead to a decent job.

A study of schoo-leavers by the Economics Institute of the University of Nijmegen shows that boys especially are likely to adjust their study plans to improve their employment prospects. Students already enrolled in the universities are selecting the most marketable specialists.

Within psychology, for example, more students are opting for organizational and industrial psychology. Clinical psychology – a field in which there is high unemployment – is currently starved of students.

Graduates still have a better job record than non-graduates. The 10 per cent level of graduate unemployment is better than the national level, which is over 17 per cent.

On the other hand, graduates are being increasingly obliged to accept jobs for which they are over qualified. There are innumerable stories of doctors starting take-away restaurants, psychotherapists running coffee shops, historians designing clothes, anthropologists dealing in Japanese prints and economists importing mosquito nets from Bangladesh.

UNION VIEW

Taking the federal role for granted

This is the time of year in the United States when the president sends his budget to Congress. We now know that President Reagan, in spite of all of the rhetoric about excellence in education, has proposed modest cuts in federal aid to higher education in the academic year 1985–86.

It is important to understand that the Congress can only appropriate funds up to limits allowed by legislation authorizing programmes. The relationship between authorizing legislation and appropriations is that between establishing programmes and actually funding them.

In 1984, the Congress may begin to consider reauthorizing the Higher Education Act of 1965 which establishes the federal financial role in American higher education. Although the current legislation does not expire until 1985, Congressman Paul Simon, Democrat from Illinois, the chairman of the House of Representatives postsecondary subcommittee, has indicated that he expects to hold hearings on reauthorization of the Higher Education Act this spring.

Congressman Simon has circulated for comment an interesting memo outlining his ideas for reauthorizing legislation to govern the federal role for the rest of the 1980s. The major title of the legislation presently in place provides federal student aid programmes through grants, loans and money for work/study jobs on campus. The current programmes are complex and represent a compromise between public and private institutions.

Congressman Simon wishes to make the grants an entitlement for all needy students. Such an entitlement programme would mean that the president and Congress would have to fund the grants for all needy students who met legislative standards.

His formulation would allow the funding up to 75 per cent of the tuition charges. There would then be an additional specified allowance to cover non-tuition, school-related expenses.

This formulation represents a compromise between public and private institutions in that the entitlement character would help public colleges and the fact that there is no cap on tuition charges would help the private institutions.

Another innovation in the Simon plan is the development of a new programme of endowment challenge grants to institutions which may be tied to a commitment to hold back increases in tuition charges. The first year programme would authorize $600m, a significant new approach to federal aid to institutions which has been tried in regard to historically black, developing colleges, but has never been implemented on a large scale.

Although the endowment approach offers real promise, an attempt to use modest endowment grants to the institutions to promises not to increase tuition is not especially constructive. Tuition increases are cost driven and only very substantial endowments can reduce the need for tuition increases to meet increasing costs. The endowment idea without the tie to tuition price control would be a step forward. It is time for the United States to take such a step.

Irving J. Spitzberg, Jr

The author is general secretary of the American Association of University Professors.

Jon Turney visits the SERC's Spallation Neutron Source

Beams away!

If you want to see a construction project which involves everything from heavy civil engineering to the most delicate electronic control, you should visit the Rutherford-Appleton laboratory in Oxfordshire. Here, the largest establishment run by the Science and Engineering Research Council, the 200-strong team building the Spallation Neutron Source is heading for the final stages of an eight-year project. The first university researchers should set up their experiments on the machine before the end of the year.

What university researchers want are slow neutrons – lots of them. The Rutherford staff, who will tell you at every turn that their job is to serve the universities, are getting ready to oblige. Neutrons are informative particles because, having no electric charge, they pass through the electrons which occupy most of the space in solids and interact with atomic nuclei. So the behaviour of objects under intense neutron bombardment tells physicists and biologists things they cannot find out by other means like X-rays.

But building a neutron source powerful enough for researchers' current needs is far beyond the resources of any single academic department. Hence the need for a central facility. "Spallation" in the machine's title simply means that the neutrons are a secondary product, generated by bombarding a uranium target with high-energy particles from an accelerator.

This is similar to the reaction taking place in a normal atomic reactor, and other research centres like the Institute Laue-Langevin in Grenoble use a reactor as a neutron source. However, as experimenters want short pulses of neutrons of known energy, most of the reactor output is wasted. Using an accelerator means the whole apparatus can be tailored to produce a more intense series of neutron beams without such waste.

House-training neutrons like this is still expensive – the whole project has cost around £45m. But using Rutherford as a base helps make the Spallation Neutron Source a good deal cheaper than it would be if the builders started from scratch. For a start, it is housed in the buildings which once gave a home to the Nimrod accelerator used for particle physics research. Nimrod was closed when the council decided to concentrate its money for particle physics at CERN in Geneva. The fact that the SNS is being built for the SERC's science board shows both how the Rutherford laboratory has diversified, and how the "small scientists", solid state physicists and biologists, now often need big facilities.

It takes David Gray, the genial head of the project, well over an hour to walk a visitor around the SNS buildings. That is one measure of the scale. The machine falls into three parts, the plan view looking like an enormous train set. First there is a linear accelerator, in which negative hydrogen ions (H^-) are sent down a column, largely made from parts salvaged from Nimrod, which accelerates them by applying an electro-magnetic field. When they reach the end of the linear track they are moving at one third of the speed of light, but this is still not fast enough.

To increase their energy the hydrogen ions are injected into a second accelerator, a circular proton synchrotron. Before entry into the synchrotron ring, the negative ions are stripped of their two electrons by passing through a thin metal foil. This trick, which produces positively charged hydrogen ions, or protons, gets around physical restrictions governing the intensity of the particle beam in the synchrotron. In the synchrotron, as in the rest of the system, the beam is steered by powerful magnets, while further electromagnetic acceleration increases the energy of each proton ten-fold in the time it takes to travel round the ring 15,000 times – about one hundredth of a second.

The trickiest engineering is mostly needed for the synchrotron hall. For instance, the evacuated ring the protons pass round – the complete circuit is more than 160 metres – must be accurate to within one tenth of a millimetre in every dimension. Less obviously, David Gray points to the ceramic sections of the ring, which avoid heating of metal parts by the powerful magnets used. The five-metre curved ceramic tubes which follow the path of the bending magnets are at the limits of available technology. The same goes for the signal amplifiers which keep the radiofrequency applied in phase with the protons as they accelerate round the ring. These must have the sensitivity of a good hi-fi, but put out a current of 50 Kw, 1,000 times the power of an average domestic hi-fi system.

A large array of devices must move in step if the synchrotron is to produce a well-behaved proton beam at the right energy. The ring is festooned with diagnostic instruments to monitor the beam and tell a complex computerized control system network what adjustments to make to magnets and biassing currents. If everything works as it should – and the first slug of protons passed round the ring a few weeks ago – the rest is relatively simple.

Two very powerful additional magnets kick the proton beam out of the ring and it is guided down a straight track to hit a small uranium target in the cavernous SNS experimental hall. Neutrons at last!

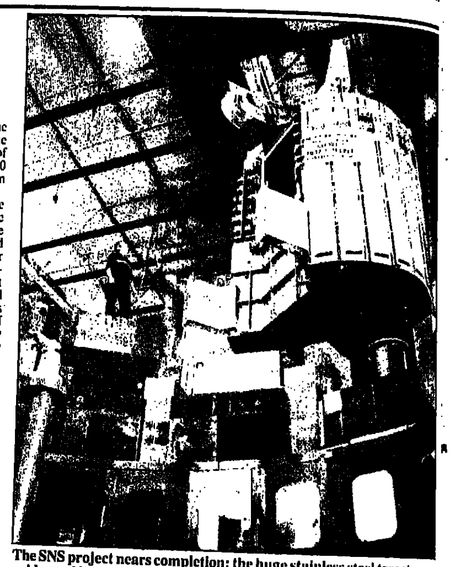
The target station is a major engineering project by itself. The synchrotron ring and target beam line are already heavily shielded, but when protons hit the uranium things begin to get really radioactive. The target is inside a steel vessel welded to nuclear reactor standards and will be shrouded in more steel and concrete. The entire assembly, shielding and all, tracks back on rails to a service point where remote handling arms will be fitted for installing and dismantling the uranium target. The target assembly also includes a set of moderators, for the neutrons produced so abundantly are moving too fast for experimenters' needs. Different moderators give the desired range of neutron spectra.

While production of neutrons is the end of one story, it will be only the starting point for a mass of new work. There are around 300 British users registered for the neutron facility at Grenoble, and most of them will now look for time on the much more intense SNS. The experimental hall at Rutherford, now largely empty, will soon be filled with the instruments devised by prospective university users.

In many cases, the information gleaned from response to neutron bombardment will complement data from other experiments. For example, neutrons of the right energy can be diffracted by a regular crystal, as X-rays can, and the patterns obtained used to deduce crystal structures of complex biological molecules like proteins.

The entire project exemplifies many aspects of the current research scene. It should be a productive link between the technical and theoretical skills developed at Rutherford over the years and the needs of the wider scientific community in universities and polytechnics. As with most SERC projects, there has never been quite enough money, and the construction programme has been scheduled to match the flow of cash. The council now needs international partners to pay for experimental stations if the new machine is to be used to full capacity. These organizational efforts are rapidly becoming traditional features of British science policy.

Aside from this, though, the SNS also provides a striking demonstration of the way theory and the instruments of a field of inquiry can develop in tandem. The complex of machines making up the SNS embodies an extraordinary network of assumptions – about the way computer programs work, the behaviour of nuclear particles, the properties of engineering materials, and the reliability of monitoring devices. And while, strictly, users do not need to know any of this so long as the right kind of neutrons come out of the right hole, all these assumptions will be tested each time a beam is generated. It would be interesting if a few philosophers of science joined the academic scientists who will flock to the Rutherford lab at the end of the year.



The SNS project nears completion: the huge stainless steel target vold vessel is swung into position at the end of the extracted beam line.

Patricia Santinelli looks at a new book which deals with changes in training since the Robbins era

Educating Teacher

By last Friday the Secretary of State for Education would have received the last responses to what is widely regarded as one of the most blatant exercises in further centralization of power in teacher education for some 20 years.

Sir Keith Joseph's determination to gather the reins of government much closer to his chest was outlined in the Department of Education and Science's draft circular on teacher training in December.

This proposed the setting up of a Council for the Accreditation of Teacher Education, one reporting directly to and with members nominated by the Secretary of State, and new criteria against which all teacher training courses will be tested.

These new instruments of central power which were recommended last summer by the Advisory Committee for the Supply and Education of Teachers have already caused great concern, particularly when so little time for consultation was allowed – unless one counts the period since the publication last March of the White Paper *Teaching Quality* which first spelled out many of the criteria.

Concern over Sir Keith's intent to seize more powers over teacher education and the growing influence of Her Majesty's Inspectorate in this field within the DES is very much reflected in a new book *Change in Teacher Education context and provision since Robbins*, which unfortunately despite its central contribution to an extremely important issue will not be published until April.

By then CATE and the new standards will probably have become inescapable realities in a teacher education scene which is already suffering from an overdose of interventionist policies.

Ironically the book reveals that a CATE existed before in the 1980s in the very different shape of the Campaign for the Advancement of Teacher Education which fought against the then current round of teacher education cuts.

The book, to be published by Holt, Rinehart and Winston, is all the more important, because it places this growing centralism in teacher education in the context of some radical developments in higher education, three sets of rationalization for teacher education, spelling out the major role played by demographic trends and looking ahead to future needs.

As the introduction of the book points out the contrast between the 1960s and 1980s could hardly be greater. Lord Robbins reported during a period of economic expansion, when education was seen as a key both to personal fulfilment and to national salvation.

"But by the 1980s education like other areas is increasingly being called to account for national economic failure, a rising level of social disorder and lack of national purpose," the editors say.

These dramatic educational and social changes in emphasis, the editors argue, have been far more reflected in the field of teacher education than in any other because of its unique position, caught as it is between the worlds of school and higher education. Indeed they describe it as the litmus paper of society.

"We are struck by the paradox that in a period of progressive democratization in our national life, a process reflected in schools, teacher education, institutions and validation procedures, there has also been a marked centralisation of government," the editors say.

The book offers as many diverse and some quite distinctly contradictory accounts of this period as there are contributors (about 20). For example Dr William Taylor, principal of the University of London and rumoured to be Sir Keith's choice as chairman of CATE, may agree on certain developments with Mr Gerald Fowler, director of North East London Polytechnic, and an earlier minister of education, but not as to why they occurred.

Other well-known figures among its contributors who span the world of universities, polytechnics and colleges are Professor Alec Rose of Lancaster University, Professor Maurice Craft of Nottingham University school of education, one of the editors of the book with Robin Alexander of Leeds University and James Lynch of Sunderland Polytechnic.

In his contribution *Change and Continuity in Teacher Education* which is also an effective summary of some of the issues covered by the book, Professor Craft points out that the growing central control of teacher education is all the more worrying because it is taking place in the context of increasingly centralized educational planning.

"The closure of the Schools Council with its strong professional links and the publishing of detailed ministerial evidence on 16-plus examination criteria has been paralleled in higher education by the direct funding of named areas of in-service training, and by the determination of 'new blood' and other kinds of university appointments in specific and specified areas," Professor Craft says.

Referring to the newly proposed criteria, he stresses that much will depend on implementation, and that for example too tight a match between A level and BEd specialization may exclude lively minded sixth-formers, and restrict recruitment to traditional subjects. Moreover, a CATE which is not independent is unlikely to benefit teaching quality.

"As Lawton commented, why the hurry to push through the criteria with so little time for discussion. It also seems strange that a Conservative administration avowing 'freedom' should set up machinery that could so easily be bused by future politicians."

One solution he sees as an alternative to central government control is the long overdue General Teaching Council which would be concerned with the control of admission, accreditation, and professional standards.

Professor Alex Ross who is equally in favour of a General Teaching Council takes a far more forgiving view of government interference, and puts the blame squarely on the profession itself.

He points out that what some have interpreted as unnecessary intrusion by the Secretary of State into matters which more properly should have been left to the profession is in part legitimate because of Sir Keith's responsibility for conferring qualified teacher status.

"Such a duty continues because the profession itself has not managed to create a professional body which could take on the duty of regulating entry to and dismissal from the profession," Professor Ross says. "The Secretary of State and his predecessors have had perforce to fill a vacuum which does not exist in the case of the legal and medical professions."

Professor Ross stresses that once a professional body has been established, it will undoubtedly wish to exercise control over the content of training programmes, with teacher education having a direct say in the preparation of future members of the profession, thus escaping from the present over-politicization of teacher education.

Professor Ross's unsurprising support for the BEd is bound to be welcomed, particularly as his suggestion that the three-year BEd should be scrapped is becoming fast already with a majority of institutions running four-year honours courses.

His view of the BEd is not shared by Dr William Taylor in his contribution *The National Context – 1972-1982*. Dr Taylor who was a leading supporter of the PGCE and the universities in ACSET, basically believes that a limited role for the BEd, at least at secondary level is inevitable.

It would have been useful if Dr Taylor had enlarged on reasons why the BEd lost its importance gradually to be replaced by the PGCE as the main route to secondary teacher training. He does not explain that recruitment to the BEd took a dive in 1980 from which it has recovered, mainly because of the new requirements for maths and English O level.

Dr Taylor's point that the trend towards university-based degrees plus PGCE routes of training owed more to planning imperatives than to politics is partially supported by Mr Gerald Fowler's account of *Policy Formation and Administration* but for quite another reason.

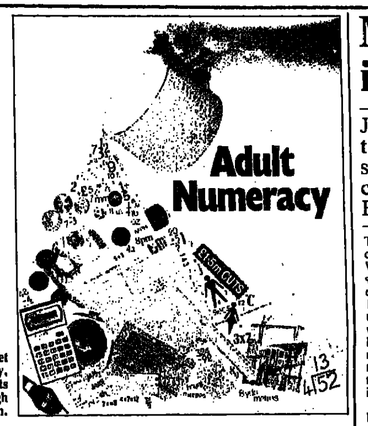
He points out that the three-year BEd has the advantage of being economic because it is shorter but the disadvantage of creating a planning gap, as indeed the more expensive four-year BEd and other four-year concurrent courses do.

"It is therefore easy to see the attraction of governments towards the consecutive PGCE route. The lead time for adjusting the system to fluctuations in the number of potential pupils is greatly reduced. At the same time this is indeed a cheap way of providing teachers."

Mr Fowler sheds interesting light on the events of the immediate post-Robbins period and the two opposed schools of thought within the DES. One championed by Sir Anthony Part favoured teacher training being put under the aegis of universities, while Sir Toby Weaver's philosophy favoured local authority control.

Literacy unit counts on the next ten years

As ALBSU lays down its challenge for the future Maggie Richards looks back at its innovative work.



The unit's leaflet on numeracy, available from its office in High Holborn, London.

Somewhere in a filing tray at Elizabeth House sits a slim volume in a lilac and mauve cover. Attached to it, and presumably awaiting ministerial sanction, will be recommendations for the future of a small agency which has made one of the most significant contributions to adult education in the last decade.

What the Open University achieved at the top end of the academic scale, the Adult Literacy and Basic Skills Unit has mirrored along the bottom line. Both agencies were instrumental in pioneering distance learning techniques and both relied heavily on the efforts of their outreach tutors.

But, unlike the swift progress at the top end which led to the establishment of the OU, awareness of illiteracy as a problem and attempts to tackle it were slow to develop. Among those most prominent in pursuing the issue in the early 1970s was the British Association of Settlements. Feedback from its Cambridge House settlement in London indicated the possibility of a large and unmet demand for adult literacy tuition. Few local education authorities offered such provision, and much of what was available centred on childrens' books or remedial material.

From the scanty statistics available the settlements association calculated up to two and a half million people in Britain were semi-literate – ie failing to possess the reading skills of an average nine-year-old.

The settlements association began to press for urgent parliamentary reform. Between 1972 and 1975 workshops and conferences focused on the problem, and the issue eventually reached the House of Commons. In response to the growing pressure, the Adult Literacy Resource Agency, with a budget of £1m, was established in April 1975.

But one factor above all others contributed to bringing literacy to the forefront of public attention. The BBC ran *On The Move*, a series of short television programmes aimed at viewers with literacy problems and screened at peak viewing hours. It was backed by a national telephone referral service, operated in conjunction with local education authorities through the new literacy agency, and appealed for volunteers to become tutors.

The response was overwhelming. The literacy movement was swamped with clients and prospective tutors.

Current director of the agency Mr Alan Wells recalls those heady days with mixed feelings: "Amazing numbers of people were stimulated by the programmes and came forward to take part, it is true. But we would have 100 students coming forward to take part in a particular scheme and then, within months it had risen to 400, with another 100 on the waiting list. To try to enlarge your scheme at that rate with inexperienced tutors was extremely difficult.

"There was no way of controlling supply and demand. A lot of potential students did not get help quickly enough or in the way that they needed, so they dropped out. We found too that the programmes motivated students but their interest diminished when the television series finished."

And there were still considerable numbers of people not prepared to come forward. By the end of the agency's first year it was clear the demand for literacy provision had by no means been fully taken up, and it was given a further two years' lease of life. At the end of that period, in 1978, the agency could boast that every local education authority now offered adult literacy classes.

Attitudes about the nature of the provision had changed too. As the literacy schemes took root at local level and the impact of the television series began to wane, students with different needs began to emerge.

The DES accepted in 1978 the agency's assertion that "the further development of adult literacy needs to be considered in the context of a strategy for adult basic education as a whole", and handed the task of further investigation over to the new Advisory Council for Adult and Continuing Education.

The agency was to continue its work for a further two years under a new title, the Adult Literacy Unit, with the remit of "provision for adult literacy, or provision in which adult literacy is a substantial proportion".

By the end of 1979 the agency was able to incorporate numeracy, English as a second language, and basic skills into its programme. It was also given a new name, the Adult Literacy and Basic Skills Unit.

Along with constant revitalization of the agency, came the realization at Government level that literacy and related skills had become a long term project. In 1982, the under secretary of state Mr William Shelton, declared: "There is overwhelming evidence that the disadvantage of lacking basic education is not going to be removed by a short burst of activity."

In its current recommendation for the future of the agency, ALBSU argues that a lack of long term planning and the process of renewing the agency's contract every two or three years have seriously impaired development.

"A succession of relatively short life units has created an atmosphere of uncertainty which has affected the morale of those closely concerned with the provision of adult literacy and basic skills and made provision appear as a temporary expedient. Although short extensions of the period of operation have been welcome they have brought in their wake additional problems and reinforced the lack of a real strategy at Government level.

"It is not, in our view, possible to establish and develop a high quality framework of provision through a strategy of short-term units with varying conditions of operation and we would therefore reiterate our belief that a longer period of operation is necessary.

"Although we would not wish to recommend an indefinite period of operation, we believe that continuation of ALBSU after 1985 should be for a realistic period of, say, 10 years, subject to a mid-term review."

Ideally, to safeguard the future of literacy and basic skills in the long-term, the agency would like to see an amendment to the 1944 Education Act, to ensure that provision for adult and further education, including basic skills, is made an "unequivocal" duty of each local authority.

Another weakness in the agency's approach has been the lack of research carried out on past programmes. From the beginning, data on illiteracy has been in short supply. When the British Association of Settlements set about compiling statistics to aid its campaign it relied heavily on postwar surveys of school-leavers' literacy capabilities.

In an attempt to gauge the success of the literacy programme in 1978, the DES conducted a series of diagnostic tests in collaboration with some literacy schemes. Results showed that a quarter of the students monitored had made substantial progress, while in 10 per cent of cases a recognizable improvement had taken place. The remaining 25 per cent of participants showed no perceptible gain in skills.

More recently, in 1981, a National Children's Bureau study of 12,500 people born in one week in March 1958 posed questions on literacy, numeracy and other basic skills. Answers obtained from the 23-year-olds involved indicated 10 per cent had experienced literacy problems since leaving school, while 5 per cent reported numeracy difficulties. Few of those who revealed lack of skills had sought tuition, but it was hard to assess whether this merely reflected a post-adolescent reluctance to return to an educational environment.

The results have awakened new fears among agency staff that the evidence suggests far more adults may be sub-literate or sub-numerate than had previously been assumed. In its latest submission to the Secretary of State it asks to be allowed to initiate and sponsor a limited amount of research.

The statistics that are available do demonstrate the enormous achievement of the literacy programme. Ten years ago only 5,000 to 10,000 students received help in the area of basic skills, but since the launch of the literacy agency more than a quarter of a million adults have requested aid. Currently some 30,000 students are undergoing tuition, and the programme has enlisted the help of 25,000 volunteers. There has also been a shift of emphasis as new students have appeared with differing needs. Numeracy referrals to the service are increasing, and basic educational provision to the handicapped, young unemployed, and ethnic minorities is expanding.

As the agency's submission on the future points out: "The challenges of the next decade, including changing patterns of employment, the advent of new technology and the development of our society in general, mean that mastery of basic communication skills will become increasingly important if those who have benefited least from the education system – often unskilled and unqualified – are to be able to take a full part in the challenges ahead.

"Adult literacy and basic skills provision has been one of the major developments in education since the war and owes much to the establishment of an effective partnership led by a government-sponsored central unit."

Modesty is the policy in the new White Paper

John O'Leary analyses the Government's spending plans which could be out of date by Easter.

There were few surprises for higher education in last week's Expenditure White Paper, but those who were sceptical about previous Government expectations of level funding after 1984/85 will now be convinced that they were right. Education as a whole will only be maintained at its present level if inflation and pay settlements match ministers' optimistic projections, and higher education is restricted to even more modest cash increases.

Indeed, the White Paper makes no bones about the prospects. "For the universities, the cash available will require a measure of increased economy if standards are to be maintained. Provision per student will in any case be reduced as a result of increased admissions during the years of peak demand. Funding for grant-aided institutions will be reduced by about 4 per cent over the period, implying increased productivity and efficiency," it says, adding later: "The plans for local authority higher education assume the achievement of a significant tightening in staffing ratios in 1984/85 through the loss of lecturer posts, including some compulsory redundancies . . . and reductions in unit costs through increased efficiency."

For the public sector, such an analysis was inevitable after the National Advisory Body's planning exercise. The size of the advanced further education pool for 1984/85 was already known and the closure of departments and whole institutions had to mean at least some compulsory redundancies.

But, although the news for the universities is slightly better, the figures do not live up to the Prime Minister's pre-election hopes expressed in her oft-quoted letter to the Association of University Teachers.

Nor is the picture as rosy as last year's White Paper implied. "The cash available should be sufficient to allow the level of provision in each sector to be broadly maintained in 1985/86, subject to an appraisal of the results of contraction and of the requirements of each sector of higher education in the long term," it said.

Now the plans for the universities allow for increases of 3 per cent and little over 2 per cent in 1985/86 and 1986/87, which is consistent with the whole education programme but seems hardly likely to cover costs, even on the current projections for student numbers. Since they are almost certain to rise when revised projections emerge from consultations with the vice chancellors and the Royal Society, the increases begin to look decidedly small.

Last week's budgets were based on the lower level of participation calculated in the student number projections produced by the Department of Education and Science. They have not been divided between the universities and the public sector, but they forecast declining admissions to full-time courses from now on, bringing a 6,000 fall in total numbers by 1986/87. Should these estimates prove too pessimistic, as analysts inside the system contend, there will necessarily be a further squeeze on funding levels unless the Government provides more resources.

The big loser next year, however, appears to be adult education, which suffers a cut of more than 21 per cent, from £91m to £73m. The position is only marginally improved over the remaining two years covered by the White Paper since the adult education budget rises again to £80m in 1985/86 but then is held at that level.

Only science and the voluntary colleges can take much satisfaction from the new spending plans. Yearly increases of 4.5 per cent, a little more than 3 per cent and 4 per cent are said to be sufficient for the level of scientific provision to be "broadly maintained", with a little extra money included to allow for the sharply rising cost of international subscriptions.

£m cash

	1980/1	1981/2	1982/3	1983/4	1984/5	1985/6	1986/7
Higher and further education (including teacher training)							
Universities							
Capital	113	119	120	121	124	130	130
Non-universities							
Capital	109	86	88	91	73	80	80
Universities							
Current	1,013	1,043	1,258	1,305	1,338	1,380	1,410
Voluntary and direct grant							
Current	79	82	90	94	98	103	108
Maintained sector advanced							
Current	444	487	599	800	585	600	820
Student awards	763	883	796	811	816	820	840
Maintained sector non-advanced (except adult education)							
Current	713	827	901	977	962	980	1,000
Adult	69	77	82	91	73	80	80
Total education							
Capital	629	626	629	516	448	460	480
Current	9,876	10,864	11,671	12,323	12,054	12,410	12,680
Total	10,504	11,390	12,200	12,839	12,502	12,880	13,160
Science							
10.5 Research councils, etc							
Capital	72	72	75	74	86	90	90
Current	322	380	407	444	465	480	500
Total science	393	451	482	517	550	570	590
Total education and science							
Capital	700	698	804	590	533	550	570
Current	10,197	11,243	12,078	12,766	12,519	12,900	13,180
Total programme	10,898	11,841	12,882	13,356	13,052	13,450	13,750

Student numbers	thousands						
	Home students (full-time and sandwich)						
	1981/2 Actual	1982/3	1983/4 Provisional	1984/5	1985/6	1986/7 Projected	
Undergraduates in universities (GB) and advanced course students elsewhere (England)	415	431	444	449	449	443	
of which							
Admissions	143	147	150	149	148	144	
Postgraduates	41	38	38	40	41	40	
Age participation rate GB (%)	13·2	13·4	13·6	14·3	14·3	14·2	
Part-time students in higher education:							
Universities (GB), the Open University and advanced course students elsewhere (England)	270	274	274	274	274	274	

Bernard Crick

Homage to Catalonia and the British Council

The *Hotel Colon* is in the Plaza Nueva opposite the Cathedral in the Barrio Gotico, the old quarter of Barcelona. Downstairs or *up-front*", as our cousins say, *looks better* than up. The bedrooms are by no means as grand as the portico, the position or the porters alliteration is now all the rage in my Party). When I stayed here last the *manager* refused to accept Clydesdale notes, which was all my card could extract from a Scottish cash point the night before I flew south. This put me in a spot, so I felt no love for the *Colon*. Yet it would have been churlish to have refused when the British Council billeted me here for the inevitable three day (I swore not to, but I can't avoid *naming* the holy name again) Orwell conference *con la colaboration* Institut De'Estudis Catalans, Universitat de Barcelona, Universitat Autonoma de Barcelona, *Associacion de Estudios* Anglo-Norte Americanos, etc (and repeated in Spanish, "*Colaboration*" means ostensibly, as far as I could induce, taking John Wain and I out to *first-class* fish restaurants, and on my part enthusiastically attending all the other lectures including his. I even accepted the Mayor's invitation to attend the revival of the Catalan Rock Opera of *Animal Farm*.

However, back to the *Hotel Colon*. They may suffer *from* the common phenomenological disjunction between appearance and reality, but they are faithful. A letter was handed to me addressed to "Bernard Crick, Esq, *Avenida de la Catedral 7*" and marked "Private".

The Times
Private May 25, 1983

Dear Mr Crick,

The editor thanks you for the letter you kindly sent recently, which has been read with interest. He regrets, however, that it has not been *possible to find* a place for it in the correspondence columns.

Yours sincerely
A. Jones.

Two points arise: (a) the four star *faithfulness* of the *Colon* for keeping the letter for 10 months in perfect confidence that I would stay there again; and (b) the one star reliability of human memory (of which I became so aware as biographer – like all those old people talking so confidently to camera on the present BBC series). For I have not the *slightest* memory of what *wrote* to them about to merit such a personal, signed rejection from A. Jones, Esq.

It must have been pretty strong (a) to get rejected at all and *(b) for me to* have used a hotel address rather than my B**p**k College address. I've made good use of *The Times* letters' column in public debate on constitu*tional issues (never* political), ranging from British-Irish relations to the reform (ie abolition) of London government (The Mayor was sorry to hear about that). I actually met *The Times* chief leader writer at a party recently at a certain embassy, and he expressed disappointment that I had not replied to his latest long one on Ireland. I said I would when I had something new to say in antithesis and when he had something new to say in thesis. (Actually I did reply, elsewhere; there's a limit to how much *free* copy I can offer the proprietor).

But it might well have been on the Argentine, for in Spain I was moved by the view that while our Falklands campaign was *accidentally* helpful in providing the finishing touches to discrediting the dictatorship, we ought to follow it through by giving any new parliamentary regime the greatest help *possible*: an honourable settlement – "sovereignty" for them, practical control under treaty for us.

Spaniards actually think, from their own recent history, *that the safety of* democracy in the Argentine is more important than a British leader's pride. Or it could have been almost anything I had read in *The Times*. I've said before that when travelling in far lands one finds the odd copy, it arouses such exaggerated filial expectations that, on actually reading it, and always more closely than at home, one is always disappointed – especially at what used to be the features page (authoritative and considered articles) but is now a kind of therapeutic free-expression board for opionated ranters.

Back to *Barcelona*, however. The interest in things English and in Orwell is astonishing, as is the depth of local knowledge: three days of excellent papers by Spanish and Catalan *scholars* on many aspects of his work, not just *Nineteen Eighty-Four* and *Homage to Catalonia*. Indeed the latter can be somewhat disappointing to a Catalan. Orwell *seems* to have had very little idea where he was, rather than any province of Spain of that name. He called the language that everyone spoke "Spanish". An old ILP *comrade of his* who came out with a BBC television team last year said that he could remember only the Spanish swear words. But the words he recognized when put to *him* were in fact, Catalan.

Yet they Catalans see Orwell as a free spirit and a man who tried to live his principles: he came to fight to *preserve a republic*. They are sardonically aware that most of the famous English intellectuals who came to Spain did not get mud on their boots. One did a little broadcasting, another attended a congress of anti-Fascist Intellectuals and another came to get his boy-friend home. Yet the fighters came to fight, not to study the culture. They went quickly into the line and, in the case of the whole ILP contingent, not just Orwell, had to leave equally hastily with the Communists at their heels. The Catalans, however, respond to Orwell's courage and eccentricity, and have become interested in his work generally not just politically, though not uncritically. They are celebrating him as a great common writer.

Actually this is what is happening in lots of English schools. The press took up "*Nineteen Eighty-Four* and 1984" with massive overkill and a silly reduction of a *perennial* satire to a false contingent prophecy. But many schools and adult education centres are having festivals of Orwell, to celebrate the last serious (and *comic*) *English* writer to reach the common reader.

And the very existence of places like Catalonia refutes Orwell's pessimism. Who would have dreamt 20 years ago that Spain (and Portugal and Greece) would be living under a decent parliamentary regime? Orwell feared it would be difficult enough to defend the freedom we still had; but some has been clawed back. Or dreamt that a province with the history of Catalonia would be enjoying "autonomy" (federal status)?

Picking up last Tuesday's *Times* on the Ramblas I read a wild article by a colleague who seemed to say that any local government was a challenge to sovereignty, law and order. I wonder what the Catalans (let alone Scottish and Welsh) think of that. With all they have been through to reenterge as an autonomous province, they must find that kind of crazy. Englishry hard to take. They prefer Orwell's. So do I but, if I write in, I'd better use the *Hotel Colon* as address, not the college. *Some people are sensitive*, though not me.

The Warwick campus where *external* funds are rolling in for expansion

Warwick the link maker

Ngaio Crequer presents an entrepreneurial success story

When Margaret Thatcher (students permitting) visits Warwick University today she will find much to impress her: the story is one of boundless entrepreneurship achieved by dogged effort.

The obstacles for the universities created by her Government's policy *in 1981* were in the main not placed in Warwick's path. So for those trying to impress upon the Government how badly the universities were hit and still suffer as a result of *1981, Mrs* Thatcher should be seen quickly off the premises.

The university is buoyant. Many departments are now expanding more rapidly than before 1981, external funds are rolling in, physical expansion is muddily apparent with buildings going up in biotechnology, social studies and the arts centre. *Mrs Thatcher* opens the "incubator" building in the 24-acre science park today.

Ask Warwick staff if they actually benefited from the cuts and of course, like good troopers, they say not, and indeed there were minor problems. But 1981 is not a year particularly ringed in the Warwick calender.

More honestly, 1978 is one to remember, the year the university merged with the nearby college of education. The difficulty and pain of the negotiations leading to merger left Warwick with a close understanding of local authority people and needs, something it gained from later, when it was strengthening its links with the community.

In specific terms meetings that were called to build bridges between the university and city fed eventually to talks, and then action, to create the science park.

The July, 1981, letter told Warwick its money cut would go from £12.01m in 1981 to £11.23m in 1983 and it would lose 50 student places. The strategy, decided almost immediately, was to save half and raise half.

It was never forced to freeze all academic posts, as many universities felt they had to, *but took* deliberate decisions to fill or not, as vacancies arose. It was in the position of being able to say no to staff (under 10) who would have been only limited reductions in numbers of technical and secretarial staff. The flow of sabbatical leave has been virtually the same post-cuts as before.

If one compares the academic establishment (excluding new blood) between 1979/80 and 1984/85 the figures show that arts have lost seven posts, education has lost eight, science has gained seven and social studies have lost four. Broadly there has been a net loss of 13 academic posts and 10 academic-related.

The stark brutality of the University Grants Committee's selectivity strategy becomes clear if one remembers that Midlands nighbour Aston University was forced to shed more than 200 academic jobs because of the enormity of its cut.

Warwick was not forced into new directions by the cuts, rather they feel they were pointing in the right direction already.

The biological sciences department for example, which claims to have the highest grant income per capita staff in British universities, had long ago made its contacts with industry and established a flow of research grants.

The department was also studying the *right thing* at the right time and benefited from the UGC biotechnology initiative, gaining three posts.

A new £1m biotechnology laboratory is shortly to be built to accommodate contract research projects. A Wolfson grant gave the spur, and the university will find the rest.

It gained a distinguished reader in biology from Bradford University, whose own department was forced into closure by the cuts. His salary will be paid for eight years by the Science and Engineering Research Council.

The department is expanding more rapidly since the cuts than before. At the time of the cuts there were 17/18 staff, by the end of the *year* it will be up to 28. Staff hold about 36 research contracts at a value of just over £3m.

The department has won a special Medical Research Council *grant of £150,000*, on top of its normal research grant, as part of a scheme to bolster the dual support system. The UGC gave another £150,000 (unasked for) when the environmental sciences merged into the department. "A pat on the head for doing the right thing, without urging," said Dr Jenny Brown.

All this success *even though* the UGC said there should not be a department of biological sciences when Warwick was founded, but the university supported them notwithstanding.

So were the cuts beneficial? "No, it was just that we were well placed to respond to them. We happened to be the kind of deparment that is now being favoured," said Dr Brown.

And one difficulty is in admissions. This year we had 1,200 applicants for 87 places. Before the cuts if you were three out in your estimates the university would find the cash. Now if you are one out there are penalties. It is hair-raising."

Warwick would dearly like to *expand its science* numbers and makes the point frequently to the UGC and, no doubt, its stream of visiting Government ministers.

When it was founded the plan was to have 50 per cent science and 50 per cent arts and social studies but owing to the national unpopularity of science for many years, Warwick achieved only 30 per cent science numbers. It cannot change round at the expense of the existing humanities but is all ready to go if the UGC lifts its control of student numbers.

Certainly if the UGC judges a university by its ability to attract outside research, Warwick is in pole position. It has drawn up a league table, based on UGC data, to show that it gets *more research* grants per member of staff in biological sciences, mathematical sciences, physical sciences and technology than any other university. Second is Sussex, then Cambridge, Oxford, London, Edinburgh, Southampton, Leicester, Sheffield and York.

The school of industrial and business studies is *another example* of expansion and new initiatives. The subject was protected by the UGC in 1981.

The department attracts a high number of overseas students and hopes as a result that this will pay for another four posts, because it can keep a percentage of the extra income.

Another two posts, £50,000 per year over five years, *have been obtained* for manufacturing strategy and policy, paid for by the university's anonymous benefactor, and a private foundation.

Two new projects that will bring in extra income are the Manpower Service Commission's enterprise programme, aimed at encouraging small businesses, and an external MBA, which will be *run along the same lines* as London's external degree.

One way the university saw to increase its income, and also provide academic accommodation for a growing number of new projects, was to convert a run-down student residence into a conference centre and centre for manufacturing renewal.

Arden House is *an executive post*-experience centre. It is a high quality residential centre with 60 bedrooms but also houses the integrated graduate development programme. This is a *scheme* by in which 90 hand-picked science graduates who will be full-time employees of their companies will blend academic tuition with *practical* industrial *experience over a 2½-year* period.

The scheme is funded jointly by Rolls Royce, BI. and Lucas and the Science and Engineering Research *Council*.

Much of Warwick's entrepreneurial success of course is due to Professor Kumar Bhattacharyya, who became professor of *manufacturing systems* three years ago. Since then he has attracted research money in excess of £5m.

Arden House makes a profit of between £30,000 and £50,000 a year. The residences next door will soon be converted to make another 40 bedrooms available and the principal's flat of the former college of education will also be used.

These developments have also helped Warwick to become the largest centre for CAD-CAM, computerized factory automation, training consultancy in Britain.

In numerous ways Warwick is recognizing its role in trying to put the Midlands back on the map in manufacturing, and trying to revive and refresh its industry generally.

According to Mr Joe Rushton, deputy registrar: "The book, *Warwick University Ltd* in 1969 did us a lot of damage. It has taken us many years internally for us to be entirely happy forming links with industry, and for industry to realize we are here. We are now over that problem."

Most intellectual activities, and physics is no *exception*, tend to run in fashions: in the case of research this often results in a rapid, sometimes almost explosive, growth of activity in some particular field of interest. Sometimes this growth follows a major innovation, such as the invention of the laser, which made coherent sources of light available for the the first time and thus opened up completely new fields.

More often, certainly since the 1940s, such expansion has resulted from the lack of new scientific knowledge required for some exciting, possibly urgent new application: for example, the rapid postwar expansion of nuclear physics research effort to satisfy various national requirements *for nuclear power and weapons*, which later settled down at a lower but more stable level as an important branch of fundamental research; or the "space-race", motivated by a potent mixture of scientific curiosity and national prestige.

But perhaps the best example in the non-military field is the emergence within the last 30 years of a major new branch of physics, almost entirely in response to the *quest for an unlimited* and benevolent source of useful energy, based on the process of thermonuclear fusion.

This process, which represents the main source of heat in the sun and stars, depends on the fusing together of the nuclei of light elements, such as hydrogen and helium, accompanied by the release of considerable energy.

The potential political, social and economics advantages of such a form of power production, given that its fuel is almost universally and indefinitely available, and so not subject to blackmail by suppliers, and the reactors both inherently safe and environmentally clean enough to satisfy the most vociferous lobby, make such a prospect most attractive to governments (at least to those who look beyond the next election), especially as the only realistic long-term alternative to fusion for large-scale power generation is the widespread use of fast-breeder fission reactors. This has resulted in the present world-wide fusion research programme which is currently being supported by governments, both *individually and collectively*, at an *annual rate* well above $1,000m.

Most of this expenditure is devoted to finding out just how matter behaves at the extremely high temperatures (around 100 million degrees) necessary even for the easiest of all possible thermonuclear processes to occur on an earth-bound scale.

At such temperatures all matter is completely ionized, ie its atoms no longer exist as such but are decomposed into their constituent positively-charged nuclei and their negatively-charged electrons, now no longer bound to the atoms but free to move. The resulting hot gas of charged particles is called *plasma* and, unlike cold gas, is a good conductor of electricity by virtue of its more-or-less freely moving charged particles. Plasma being a good conductor also means that, in principle, one can control it using magnetic fields and, indeed, all sustained (as distinct from explosive) reactor designs which have been proposed rely on strong magnetic fields to maintain the hot plasma in its proper place.

Although, when the first *experimental* steps towards fusion were taken in the early 1950s, the general behaviour of plasma was thought to be understood, this belief was based mainly on models devised by astrophysicists who had been theorizing for several years about the properties of fully ionized gas in magnetic fields inside the atmospheres of stars, and had never been tested by experiment.

Such experimental evidence as did exist was based on experience with gas discharges, electron beams, or the propagation of radio waves through the earth's atmosphere, each of which exhibit some plasma-like behaviour. In truth, at the time there was essentially no experience at all with fully ionized plasma, and certainly none at the temperatures required for a fusion reactor.

Thus, although it was possible during the first few years to predict with reasonable confidence just what plasma conditions would be necessary in order to produce a self-sustaining thermonuclear "flame" (like a chemical flame but burning nuclei, not atoms), so little was actually known about how plasma would actually behave under such conditions that distinguished physicists could cheerfully make what soon proved to be wildly optimistic predictions on how the necessary conditions would be achieved.

These predictions were based on calculations of how either individual particles or a perfectly conducting conventional fluid would behave in the controlling magnetic field.

In reality, although such simple descriptions of plasma sometimes be used to predict its behaviour, both are gross oversimplifications and their more general use is likely to lead to misleading conclusions, since plasma is neither just a large number of particles behaving individually nor a completely homogeneous (continuum) fluid, but a very much more complicated system in which every particle affects *to some extent every* other one via the *fields* of their electrical charges.

Notwithstanding the above, to a first approximation the behaviour of bulk plasma can be modelled around the idea that, since its electric fields *falls off* rapidly with distance from each particle, the mutual interaction between two particles is important mainly when they are close. In that way it is possible to evaluate the bulk properties of the plasma by a statistically appropriate summation of all such close "binary" encounters, provided one includes a correction factor which takes into account the smeared-out effect of all the other more distant charges; this factor fortunately turns out to be remarkably *insensitive to quite* large *changes in plasma* conditions, such as particle number density and temperature.

Under many circumstances this simple model does indeed give a good description of measurable plasma properties, such as its electrical resistance, or the rate at which it emits and absorbs electromagnetic radiation. One can then extend these ideas to the motion of the material as a whole, using an averaging procedure to absorb the details of the individual particle gyrations, so that the plasma can be regarded as just another fluid which happens to conduct electricity, like mercury for example. This description is also very *frequently useful*.

However, there are certain ways in which plasma can exhibit properties which are so unique that it must properly be regarded as a fourth state of matter, ie distinct from the solid, liquid and gas states with which we are familiar because they exist in everyday life. For example, the particles of one charge may for some reason bunch closer together than they would on average so that their collective electrical charges tend to reinforce each other: if this happens the behaviour described above can be greatly modified, and the bulk properties (such as resistance, or radiation emission) vastly altered.

Or, although the particles may be present in astronomically large numbers (a cubic metre of typical laboratory plasma would contain around 10^{20} charged particles), each is a discrete individual with its own speed and direction, in general quite different from the appropriate "averages" for the bulk plasma which characterize its temperature and "fluid" motion; thus, there will usually be some particles which happen to move at the *same speed and direction as some disturbance* or as one of the many possible waves in the plasma, and so interact with it much more strongly than do its fellows, rather like the expert surf-rider gains energy from an ocean wave. This leads to phenomena of a type which cannot occur in other media.

Once the failure of the early experiments to live up to their expectations became clear, as did the *fact* that this *disappointment* was due to our lack of understanding of plasma itself, it became obvious that a great deal of basic research and new understanding would be necessary before physicists could predict with any degree of confidence how plasma would behave.

And so began the long, and sometimes very frustrating, task of learning how to make fully ionized plasma free from contaminating impurities (which tended to radiate the heat away as fast as it was put in); how to design and make the very precise magnetic "bottles" of various shapes to hold the plasma away from the walls of its container (now to make reliable and detailed measurements of *the important plasma* properties so that the observations could acquire proper quantitative meaning; and, one of the hardest tasks, how to heat plasma from the 100,000 degrees typical of the early 1960s to the 100,000,000 degrees required for fusion. Along with the experimental programme, theoreticians needed to develop new ways of modelling the very complex physical systems.

The *fact* of how much this has been achieved are far beyond the scope of this article. It should be said, however, that while every type of magnetic configuration tried was based on its proven ability to confine individual particles, in every instance the plasma, appearing in one or other of its collective roles, found new ways of escaping the other excellent trap. Gradually, as these loss phenomena came to be better understood, both the magnetic configurations themselves and the method of preparing the hot plasma were refined so as to minimize the losses.

An essential adjunct of this process has been the development of the necessary technology *required to perform these experiments, in some* cases (such as ultra-high vacuum techniques, large-scale computers, super-conducting magnets, advanced digital electronics) shared with other "big science" fields, while in others, such as the production of very powerful beams of particles or of millimetre-wavelength radio waves (which, only a decade ago, would have been regarded as quite unrealistic) owe their origins entirely to the fusion programme in which they *are extensively used to heat plasma*.

Much effort has gone, and will no doubt continue to do so, into inventing and adapting methods of measuring the properties of the plasma in ever greater detail: in many cases this has required the development of special types of instrumentation (such as new lasers or time-resolved submillimetre spectroscopy) which have application in other fields.

It is perhaps interesting to notice that although for most practical purposes the plasma conditions are such that those simple, classical laws of physics which were already well known in the last century are quite adequate (ie relativistic or quantum mechanical *effects* can be neglected), the mathematical equations needed to describe the plasma, even in some of its simple approximations, are usually very difficult to solve.

This complexity arises not only from the need to include all the important effects required to make the theory relevant, but from the inherently non-linear nature of the material itself, so that, for example, the response of plasma to a disturbance does not simply increase with the size of the disturbance, but the medium itself becomes modified so that new disturbances may appear. Since exact analytic solutions to non-linear equations are only rarely possible, theorists frequently resort to numerical computation to find appropriate solutions.

Not surprisingly, plasma physicists make extensive use of computers, and several of the world's largest and fastest machines are totally dedicated to solving plasma problems. Even so the very nature of the problems can (for example, in the absence of symmetry) make such heavy demands on the computer's capacity that in some *important cases even the best available can cope with* only quite crude approximations to the real situation, despite considerable mathematical ingenuity in finding new ways to minimize their limitations. Needless to say, plasma physicists anxiously await the appearance of the promised new generation of computers.

The past quarter century has seen the plasma physics problems posed by fusion gradually solved by a process of advancing in small steps, in which the important experimentally achieved plasma parameters (density, temperature, and confinement time) have been inched up towards those at which a mixture of the hydrogen isotopes, deterium and tritium, will ignite and undergo a self-sustaining nuclear reaction.

Each of these steps has inevitably required a significantly larger, and much more expensive, assembly of apparatus than the last. Each has required a great deal of painstaking experimentation to obtain its best performance, and to suggest ways for the next step forward. Generally, one has found that, although some of the properties *and behaviour of magnetically confined plasma* have become sufficiently well understood that they can be explained theoretically, we extrapolate this understanding outside the range of our direct obsevation only at our peril.

Some phenomena, including the all-important mechanism of thermal insulation of the hot plasma from the walls of the vacuum vessel, so far have no proper explanation at all; so that resort must be made to empirical "scaling laws" to provide guidance for new designs: such "laws", while useful, are naturally valid only within the range of conditions under which they were obtained.

Since any extrapolation outside this range carries a risk which increases with the departure from actual experience, it is perhaps not surprising that best progress has followed the "small step" approach rather than via the spectacular leaps proposed in the early days. Like all physics, the understanding of plasma must be founded on experiment and observation, with theoretical modelling and prediction valid only in so far as it *can be tested*.

How is this research organized and conducted? One quite characteristic feature has always been its international nature (save for the period 1952/57 when, in hindsight with little justification, it was kept secret in UK and USA in the belief that fusion would be too easy!), with collaboration and free movement between scientists from all over the world. In addition to the usual avenues of exchange open to individual scientists, these result from many bilateral agreements (ranging from information exchanges to joint funding and operation of projects), as well as within formal organizations such as Euratom (the EEC countries plus Sweden and Switzerland).

On the grand scale there has been a truly international study of a possible joint "world" experiment, sponsored by the international Atomic Energy Agency, reflecting the possibility that the next round of experiments may be just too expensive (around $1 billion each) for any one country or consortium to fund. Whether such altruistic collaboration will survive the time, probably not many years off, when commercial considerations become important remains to be seen: there are already signs that the major partners in such design studies, such as EEC or US, might proceed alone.

Not surprisingly, in view of the large costs of building and staffing a new experiment, the research is conducted mainly in large laboratories, either directly operated by governments or in institutions financed under contract by governments.

Many of these government funded laboratories have evolved from universities (eg Princeton, Nagoya, Lawrence Laboratories), and so have natural links with their parent bodies, and all retain close contact with universities, often as sponsors of university based research programmes. Most make their facilities available for postgraduate study, where necessary, as in the *case of non-university based laboratories, with* appropriate arrangements for academic supervision of students.

In many such cases some laboratory scientists hold joint appointments or visiting professorships in the cooperating universities, while academic staff regularly collaborate, either on a regular basis as consultants or by vacation appointments and sabbaticals, in the work of the larger laboratories.

Despite the increasing emphasis on large, expensive equipment, the universities also contribute quite considerably on their own behalf to plasma research. In fact, because of their ability to change direction more quickly, provided the resources are available, many of the new ideas evolve and/or are tested first in the universities. One important type of experimental contribution is in the area of new diagnostics, where ideas can be tested on a relatively small scale and later brought to the larger facilities where they are needed. Naturally, theoretical work is less restrictive, provided sufficient access to large computers and to the latest experimental data can be assured, and university-based groups of theorists can contribute on a more equal footing than their experimental colleagues.

The universities have another very important function, not always appreciated: the increasing concentration of effort in the major laboratories on large projects, with well-defined aims and corresponding pressures on their own scientists to achieve those aims, inevitably means that on occasion important scientific problems whose resolution is not absolutely essential to the success of the mission-oriented research can be left temporarily unanswered. Such fundamental *matters* are, on the other hand, very proper subjects of research by university groups, who are not (or should not be) subject to the same pressures or programmatic constraints as their colleagues in the large laboratories.

Finally, since plasma laboratories around the world have an apparently insatiable appetite for postdoctoral physicists, universities play a vital role in supplying this demand. (By the same token, good students embarking on PhDs in plasma physics can do so with some confidence of a rewarding research career, provided they accept its international nature and are prepared to change country if necessary.) In many universities plasma physics, which did not even exist as a subject only two or three decades ago, now occupies a major role in physics teaching and research.

As far as the main object of all this effort is concerned, the current situation is that all the plasma conditions for achieving fusion ignition have already been met, though not simultaneously because of limited apparatus size, and that *actual ignition is likely to be achieved during the* 1980s in at least one of the two large experiments (JET in Europe and TFTR in USA) which started up during the past year.

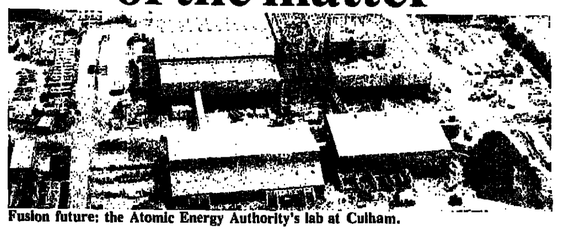
If, as we all hope, this does occur, many problems of engineering, materials technology and economics remain to be studied in a prototype reactor, even though the plasma physicist has apparently done his job.

However, physicists are already working hard at ways to improve on the methods in which the current large experiments are based, and in trying to understand the deeper mysteries of plasma behaviour even though this may not be essential *to success in building a fusion reactor* (do we yet understand every scientific detail of a coal-fired furnace?). Thus, it appears that plasma physics research will flourish for many years yet because of its potential economic benefits. Once that is no longer the case we can expect the study of the most common state of matter in the universe to return to academia.

Meanwhile, just as medical science pursues its *own holy grail of ridding mankind of the scourge* of cancer, physcist science is trying to make sure the lights remain burning for as long as Man exists. Let us hope that he still does when fusion power is ready for him.

The author is head of the Plasma Research Laboratory at the Australian National University.

Getting to the heart of the matter



Fusion future: the Atomic Energy Authority's lab at Culham.

S. M. Hamberger on plasma physics and controlled fusion research

Christopher Forsyth analyses admissions policy at South Africa's 'open' universities

Race issue is no open and shut case

For the first time for nearly 25 years, South Africa's major English language universities this year will be free to admit students to most of their faculties without regard to their race. But although this restoration of their traditional autonomy has been welcomed by the English language universities, it poses difficult questions about the racial make-up of their student bodies and their present and future admission policies. Moreover, the government retains the power to reimpose control over the racial composition of the student population.

In 1959 the Extension of University Education Act was passed by the South African parliament. Redolent of "newspeak" this Act denied access to the established universities in South Africa to blacks (using that term to include all that were not white) unless they had been issued with a permit from the executive authorities.

Prior to 1959 the University of Cape Town and the University of the Witwatersrand had adopted a policy of open access: academic not racial criteria had been used in the selection of students. Last year, however, the Universities Amendment Act repealed the Extension of University Education Act thereby abolishing the permit system and leaving the universities free to admit whoever they chose.

This restoration of freedom, however welcome, does not presage a change of heart on the part of South Africa's rulers. On the contrary, the Universities Amendment Act 1983 envisages only a change in the method in which the racial mix at the "open" universities would be controlled. The Act contains a provision that allows the minister of national education to impose racial and other quotas upon the admission of students; and to withdraw subsidy from the universities if they fail to comply with the laid down quota.

The "open" universities bitterly opposed this change in the law on the obvious ground that the establishment of a quota system would require the universities themselves (once the quota was full) to turn qualified students away purely on the grounds of their race; while under the permit system it was the government refusal of a permit that excluded a student. The "open" universities were not prepared to do the government's dirty work.

Usually deaf to such protests, on this occasion the minister of national education, Gerrit Viljoen, previously the head of an Afrikaans language university, compromised. Although the Universities Amendment Act 1983 would not be repealed, the quotas envisaged in that Act would not be laid down by the minister.

With no quotas laid down, the universities would be free to admit whoever they chose, except in medicine, dentistry and land surveying, where a permit system would continue to operate for African students. The important point that emerges from this is that the universities' freedom to admit irrespective of race remains precarious and is liable to be revoked by the minister whenever he is dissatisfied with the racial mix in any faculty at any university.

At the time of the 1959 Act both the "open" universities dedicated themselves to the restoration of their autonomy to admit whom they chose, annual academic freedom lectures were instituted and plaques were erected at each university recording the loss of freedom. The plaque at Wits read in part ". . . it is our duty to uphold the principle that a university is a place where men and women, without regard to race and colour, are welcome to join in the acquisition and advancement of knowledge", and it aptly expresses the "open" universities' continuing commitment to non-racialism.

In theory, the "open" universities could now throw their doors wide open and admit large numbers of black students. But this is not going to happen for three reasons.

First, the admission of large numbers of black students in the short term would almost certainly precipitate the imposition of quotas by the minister. Second, it may be doubted whether large numbers of financially able and academically qualified black students exist. No student grant system exists in South Africa and students are largely thrown onto their own resources in financing university study.

This position is changing as commerce and industry make more and more bursaries and scholarships available and there are a number of ambitious schemes run by the universities themselves. The UCT, for example, using funds provided by an anonymous American donor, makes 80 Sir Karl Popper bursaries available each year. These cover all fees and expenses and are awarded on the basis of need and ability. But the fees at the "open" universities are high; sometimes double those at the "black" universities set up after 1959 to provide university education for blacks.

Financial apart, the system of primary and secondary education for blacks (and Africans in particular) may be charitably described as appalling; and only small numbers of Africans do sufficiently well in the school-leaving examination to be awarded the matriculation exemption necessary for them to be eligible for admission to a university. In 1982 only 4,714 Africans obtained matriculation exemption out of a school population (primary and secondary) of more than three and a half million. There is, however, ample scope for growth in the number of coloured (mixed race) and Indian students.

Third, such growth is not desired by the "open" universities themselves. For many years South African universities have (race apart) adopted non-selective admission policies: save in particularly competitive fields (for example, medicine) any students who completed their schooling with matriculation exemption were admitted irrespective how well they did in the matriculation examination.

The University of Cape Town against the backdrop of Table Mountain

Universities had found it financially advantageous to admit large numbers of students even if they had very poor matriculation results. Many of these students were unable to cope with university study; and there were failure rates of 50 per cent or more in some subjects at the end of the first year of study.

Both the UCT and Wits had been concerned about this state of affairs. And both universities took decisions, prior to the controversy over the Universities Amendment Act, to adopt more selective admission policies, by laying down certain minimum standards for each faculty which had to be reached by prospective students in the matriculation examination.

While the UCT envisages growth from its present 11,000 students to some 13,000 at the turn of the century, Wits is thinking of far more substantial growth (from its present 16,000 to 24,000 at the turn of the century). In order to accommodate this increase – which will take place in accordance with a carefully formulated academic plan – Wits has acquired a large parcel of land adjacent to its present campus and plans substantial development there. Even so, Wits expects the demand for places to outstrip the supply and hence the need to adopt a selective admission policy.

The universities' commitment to these policies has been buttressed by a change of government policy in regard to subsidy. Instead of subsidy being based upon the number of students, it will now be based on a complicated calculation of the productivity of the university. In essence this means that the subsidy will depend upon the amount of research carried out, the number of learned publications by staff members and the pass rate at the university in question.

Although the selective admission policies were decided upon well before the announcement in 1983 of the change in the subsidy formula, the "open" universities now have no financial incentive to open their doors wider to poorly qualified blacks. The "open" universities have accepted this change in subsidy formula without protest and it is not difficult to see why. Although the UCT and Wits produce little research and few publications by UK standards, they are markedly more productive than most other universities in South Africa and therefore stand to do very well out of the change.

For all these reasons it seems clear that there is not going to be rapid growth in the number of black students at the "open" universities. Indeed, given the indisputable fact that black matriculants emerging from a deprived educational background almost invariably have very poor examination results, the adoption of selective entry means that it will be more difficult for most black matriculants to gain admission to the "open" universities.

This has led to considerable criticism of the universities' policies by those South African academics who would like to see the adoption of some form of "affirmative action" taken to mean black students. These critics make the point that all the evidence suggests that matriculation performance is a poor guide to subsequent performance at university.

Moreover, research from the sociology department suggests that blacks with poor matriculation results do better at university than whites with poor results. This result is not surprising. A black matriculant is likely to have displayed considerable determination and ability to reach matriculation standard; but the poor white matriculant is probably simply weak or lazy.

Thus far, however, the "open" universities have eschewed "affirmative action". The desire to use criteria non-racial criteria for admission is deeply ingrained; and favouring one racial group, either white or black, would be contrary to what the universities have fought for over 25 years.

The universities are, however, trying to help students from a deprived educational background once they have gained admission; and academic support programmes at both universities provide extra tuition, especially in English and mathematics, to poorly qualified students.

The different policies in regard to growth adopted at the two universities is likely to cause them to diverge in other respects from each other. If demand for student places keeps up admission to the UCT will become more difficult than admission to Wits. The UCT, in fact, would welcome the emergence as the Oxbridge or Harvard of South Africa if more selective admission policies led to a growth in its reputation for excellence.

Numbers of black students at the UCT will grow slowly and steadily but are unlikely to exceed 30 per cent before the turn of the century, for demographic reasons these black students will be predominantly coloured (of mixed race).

At Wits, growth in the number of black students is likely to be much faster. Some estimates anticipate that even with the more selective admission policies, unless the government intervenes, 50 per cent of the student body is likely to be black by 2,000. Again for demographic reasons the black students at Wits will be largely African.

The government is likely to look more benignly upon the substantial minority of coloured students at the UCT, (especially since its constitutional plans are to draw the coloured community into alliance with the whites against the African) than a near majority of Africans at Wits.

Neither university has considered fully whether favouring black students in admission policies because of their past experience of discrimination is compatible with non-racialism and their policies of selective entry. Although the adoption of the selective admission policies and the change in subsidy formula signals defeat for the time being of the proponents of "affirmative action", the issue can only grow in importance.

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Unearthing a forgotten past

A group of highly-regarded South African academics have joined with several voices from within the black working class to mount a challenge to official apartheid versions of history. As such, another pillar of apartheid hegemony and myth is under threat.

A recent five-day history workshop and festival at the University of the Witwatersrand, the third of its kind, consolidated a relatively new South African-based revisionist trend. This is based firmly in primary research, whereby South Africa's current conflicts are being explained largely in terms of the country's economic development.

Debunked is the traditional view that amaterial mystical notions of empire and civilization lie to any significant degree behind either the development of apartheid or the colonization of the African subcontinent.

The ideology of race supremacy is seen as having been largely functional to capitalist development as a system of labour control, rather than as a cultural aberration peculiar to the long politically dominant white Afrikaner group.

This theme, together with the mechanisms of populist, working class and individual survival and resistance developed by the majority black population were reflected at the workshop as the major foci of historical and social research being conducted.

Central to this interpretation is the development of the South African diamond and gold-mining industries. Their extensive use of black migrant labour from as far afield as Malawi since the late 1900s is identified as "the most important case of socio-economic engineering on a grand scale in South African history".

The Canadian historian, Alan Jeeves, and the South African political scientist, David Yudelman, told the workshop that this mine migrant labour system, which currently involves more than half a million workers, did much to entrench segregated and repressive labour systems, provided the foundation of apartheid ideology and had a traumatic effect on indigenous black culture.

This has been a particularly fruitful area of recent research. It has been carried out among others by the social historian Professor Charles van Onselen, who heads the African studies institute at the University of the Witwatersrand.

Mark Swilling, a young political scientist at the same university, presented a paper on shop stewards' councils that are developing in South Africa's industrial heartland around Johannesburg in order to articulate a black working class response to apartheid.

Swilling's study adds to other labour history contributions by Professor Eddie Webster and Professor Phil Bonner. It is of immediate importance because its subject is South Africa's black "independent worker" movement, an amalgam of about 20 trade unions with a membership of some 400,000 workers. Alongside the resurgence of the outlawed African National Congress liberation movement, the arrival of this labour movement is seen as the most important political development of the past decade.

Research into forms of populist black resistance has been boosted by a British historian now working in South Africa, Tom Lodge. He addressed the workshop on inchoate violent black resistance waged in the early 1960s by what was known as Poqo Rept Poqo.

Lodge recently published through Longmans a more general history of this populist resistance, *Black Politics in South Africa since 1945*, which is regarded as one of the more authoritative accounts to date.

Social alienation under apartheid and mechanisms of survival developed by black people is being addressed largely through the mode of history "from below".

A young South African sociologist, Don Pinnock, delivered a paper on the coloured (mixed race) gangs around Cape Town, one of which has granted him honorary membership.

"His" gang, the Mongrels, transformed from a family group engaged in legitimate activities into a formidable fighting machine with a countrywide criminal network. He attributes this to the forced removal of black people to new areas to ensure the geographical and political separation of the races under apartheid. Dispossession, poverty and hunger comprise its genesis.

Sociologists Dr Jacklyn Cock and Erica Emdon produced a paper on a particular creche system unique to black South African society, the "childminders". A system of childminders has developed in black townships because black mothers need to go out to work in order to supplement meagre family incomes.

One of the most significant indicators of a developing South African nationalism, in the broadest sense, and cultural melding has been a relatively new pride in indigenous art and literature. Deference to European-based culture is increasingly being replaced by an African self-assertion, both black and white.

Among the 53 papers at the workshop were three locating South African literature within its social context, and implicitly rejecting the notion of the writer as an orbiter at the end of a long, thin umbilical.

Prominent in this approach is the literary historian Tim Couzens of the African Studies Institute, who has been responsible for the "rediscovery" and publication of much indigenous writing which has lain ignored or scorned for decades.

The new trend has been called the "homecoming of South African history" by Professor van Onselen. Its focus is the common people, not the Kitcheners, Bothas and Verwoerds to whose individual ambitions and actions the history of the subcontinent has so long been attributed.

As Soweto childminder Johanna Masilela told Cock and Emdon: "So I've left my history somehow. I'm happy that I've got someone who will introduce me. Let me make history please."

Howard Barrell

Blacksmiths' shops (left) served as village meeting places. Plucking geese (right) was a laborious task.

Shattering the rural idyll

Pamela Horn explodes the myth that nineteenth century English country life was peaceful and carefree

When historians examine the nature of change within a society during any period they are often tempted into making general assertions or into drawing broad conclusions which are not justified by a closer analysis of the evidence. This is particularly true where efforts are being made to advance a particular unifying thesis about the process of change, for real life rarely fits into a neat theoretical framework.

If the years between 1870 and the end of the First World War were marked by the most dramatic acceleration of the rate of social change in the English countryside, there were also wide divergences of experience not merely between arable and pastoral districts, and between highland and lowland regions, but also within those areas and even within individual parishes. Access to capital and variations in farming ability, to say nothing of differences in the size of holding or the nature of the soil itself could call forth very different responses in terms of cultivation methods applied or produce raised even within a relatively limited geographical area.

Of equal significance were the disparities in the way of life of the larger landowner and the substantial tenant farmer, compared to that of the small cultivator, perhaps in pastoral Wales or Devon, who carefully tilled a few acres with the help of his family and gained little reward beyond a sense of pride in his precarious independence and a tenacious determination to preserve it.

In the dairying area of Lancashire during the difficult mid-1890s it was claimed that such men, their wives and children were working "from early dawn to late at night". The report then significantly added: "at the present time in some districts it is the farmer's sons and daughters who have suffered rather than the land for they . . . are giving their best energies towards its cultivation, receiving no reward in the present, and with but little prospect of any in the future". Few large farmers would have been prepared to endure such a drudging routine and yet even in the early 1880s smaller properties of 50 acres or less still occupied 14 per cent of the total English acreage.

These differences in life style certainly survived the buffetings of the agricultural depression in the final quarter of the nineteenth century, as cheap food imports, particularly from Australasia and the Americas, undermined the competitive position of the British producer and led to sharp price falls. As is well known, in the late 1870s and early 1880s those general problems were exacerbated by the effects of bad harvests at home which reduced crop yields and added to farming costs.

More ominously, there were also changes in consumption patterns as urban workers began to demand a more varied diet and to reduce their intake of bread. At first it was the grain producers and those selling wool who suffered particularly from the development of foreign competition but by the mid-1890s imports of frozen meat and dairy produce had hit the position of the livestock farmer as well.

Not until the early twentieth century was there a slowing down in the inflow and a modest recovery in prices before the whole direction of agricultural output was changed yet again by the outbreak of the First World War. Now at last farmers found themselves in a sellers' market, even though the vast body of consumers were losers thereby.

During the last 30 years of the nineteenth century these vagaries of fortune led to an inexorable fall in the number of men employed on the land. Initially, there was a sharp decline even in farmers and graziers, with a more than 10 per cent drop in their numbers between 1871 and 1881, as some preferred to retire or to emigrate and others were forced out of business by bankruptcy.

However, it was among their workers that the really dramatic change occurred. Already in the 1850s and 1860s, men had moved away in search of better-paid employment in the towns or on the railways and other public utilities. But it was during the last decade of the century that the greatest drop occurred, reinforced by the labour demands associated with the Boer War in 1899 and 1900.

During the 1890s alone the number of male agricultural labourers declined by a fifth, while the number of female land workers dropped by a half. In the slightly more relaxed atmosphere of the new century, between 1901 and 1911, some small recovery took place but in no way did that restore the position even of 1891.

Inevitably such a major change in rural employment patterns had its effect upon country life generally. In some of the hardest hit counties, such as Essex and Berkshire, landowners were forced to take farms in hand, despite the expense entailed, since not even reductions in rent were sufficient to retain tenants on their holdings.

In other cases, there were vigorous campaigns to recruit Scottish farmers, or those from the pastoral western counties of England and Wales. Here at least in the earlier phase of the depression economic circumstances were less severe and there was a continuing demand for properties to rent.

The new farmers brought with them new ideas, often introducing into the eastern counties a heavier concentration on dairying enterprises or the production of hay and vegetables for the nearby London market. They sharply reduced the old reliance on grain production.

The migrants cut labour bills to the bone, relying instead on their own families as they had been accustomed to do in Scotland. Stock was brought down by train from north of the border, dealers or friends sending a few truck-loads of sheep or cattle "on the shortest notice" as the need arose. Wives and daughters took over the dairying side of the business while sons drove the horses and fed the cattle.

Indeed, in Suffolk it was said in the 1890s that Scottish men and women would "undertake work which no Suffolk woman would dream of doing", such as mucking out byres and pig pens, "which not even the female labourers would stoop to do". With this resolute commitment to hard work and a determined specialization on readily saleable produce, most of them prospered while neighbours, stuck in the old ways, were driven into bankruptcy.

However, change in the late Victorian and Edwardian countryside was not confined to agriculture. As a consequence of the expansion in mass production techniques and of technological change within manufacturing industry, the prosperity of rural craftspeople and workers in cottage industries was likewise undermined by competition from the industrial districts.

Some adapted successfully to the new circumstances, like the blacksmiths who concentrated on repairing machinery and upon their work as farriers, or, greatly daring, began to undertake motor repair work. In other cases, wheelwrights took on the tasks of ordinary carpenters.

But many were forced to leave the villages. Millers were hit especially hard by the decline in English wheat-growing as well as by the erection of large steam-powered mills at the ports to grind the increasing quantities of imported grain by modern techniques. Nearly all of the country millers who remained at the end of the century survived primarily by turning out meal and feeding stuffs for farm livestock.

The agricultural press, too, began to include advertisements for items like iron sheep hurdles and iron fencing produced by Black Country manufacturers. In the circumstances it is not surprising that the numbers engaged in making wooden fences and hurdles by the old hand methods slumped.

Even the Farnham wheelwright, George Sturt, felt the pressure of competition by the late 1880s. "Now, discontented customers would buy 'steam wheels' from London," he declared. "Lighter wheels than any that could be made in my shop – wheels imported ready-made from America – had to be kept in stock along with the ancient sort of naves and felloes." Eventually in 1889, Sturt decided to install modern machinery and changed over to the manufacture of trade vans and carts.

But not all craftspeople were as able or willing to make these concessions in order to stay in business. Their lack of experience in keeping accounts and their inadequate methods of costing inevitably added to their difficulties at a time of increasingly bitter competition.

Such craftspeople had been important for the social leadership they provided in many communities. The radicalness of village shoemakers was notorious while the blacksmith's shop often acted as an informal discussion centre as well as a place of work.

With the decline in the number and influence of these key members of village society fears were expressed in the early twentieth century that the rural population would be "composed entirely of farmers and farm labourers" and that "the affairs of the village [would] be governed entirely according to the farmers' interests". In some communities, that was largely what happened, at least before 1914.

Although by 1851 a majority of English men and women had already ceased to dwell in rural districts, it was between 1870 and 1918 that the traditional political predominance of the landed classes was finally swept aside by the burgeoning industrial and commercial interest groups.

It was then that the subordinate position of the countryside in the nation's affairs became painfully apparent. Even where increases in population did occur in rural parishes on the fringes of the larger towns during the early 1900s, they tended to be the result of an influx of newcomers, who worked outside the village and brought with them their own interests and mode of living.

In such circumstances the "natives" began to feel themselves interlopers in their own community. This growth of suburbia and the changes it brought in its train were to continue and intensify after 1918.

Nowadays there is a tendency to look back with nostalgia to Victorian and Edwardian village life, to an existence which seems more secure and peaceful than the world we know today. But closer investigation reveals the underlying tensions and anxieties which existed in countless country communities as a consequence of agricultural recession and the disruption of many traditional aspects of day-to-day existence.

As early as 1856 George Eliot had warned against the tendency to romanticize rural life and had written scornfully of painters who depicted "idyllic ploughmen" driving their teams merrily to the fields and "idyllic shepherds" making "bashful love under hawthorn bushes": As she wryly observed, "selfish instincts are not subdued by the sight of buttercups . . . to make men moral something more is requisite than to turn them out to grass".

Girls making straw plaits for the hat and bonnet trade.

Museum of English Rural Life, Reading

The Fowler brothers of Brookhall, Norfolk, c.1907.

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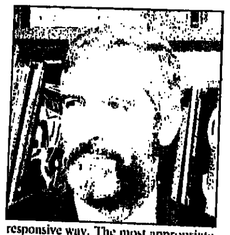
Points for the body to keep in mind

With the NAB's 1984/85 planning exercise complete William Birch (right) outlines some of the opportunities open for it to take in a longer-term strategy



The National Advisory Body has completed its planning for 1984/85 and will now be turning its attention to the outcome of the consultative exercise on "A strategy for the 1980s". It is, therefore, a convenient stage, for one who, before resigning, argued in the board for the development of an agreed strategic framework as a prerequisite to effective planning for 1984/85, to comment on some of the more important opportunities which appear to be open to the NAB. My discussion is at four levels: higher education as a whole; the local authority sector; the institutions; fields of study and research.

At the first level the essential opportunity is to provide the local authority sector with much needed leadership based on a well-informed appreciation and articulation of its strengths and an overall concept of a strategic planning body for higher education which would bring the local authority sector fully into consort with the university and the direct-grant sectors.

Among the strengths which require emphasis, four are of particular importance. First, the experience and the success of major institutions in preparing students for a variety of fields of professional and business life through courses of study allied with applied research and consultancy.

Second, the ability in such courses to prepare students to deal not only with the intellectual and practical problems which they will face in their professional lives but also, by stressing the general problem-solving issues involved, to develop their general and flexible qualities of mind. In this respect, the imputations made through the NAB that vocationally orientated courses are necessarily intellectual cul-de-sacs have been ill-informed and unfortunate.

Third, the high degree of connectivity on a regional basis of institutions of higher education with those in further education, so providing opportunities for the more able students to progress through the system; and fourth, the high degree of interaction, on both a regional and national basis, with industry, commerce and the professions through short-course provision, applied research and consultancy, based on the recognition and standing achieved in the competitive national market for higher education.

An overall strategic planning body for higher education would relate more effectively the strengths of the various sectors. It would need to draw its membership not only from the University Grants Committee, the NAB and the Department of Education and Science but also from the appointment by the Secretary of State in their own right of a significant number of distinguished nominees from industry, commerce and the professions. Such a body would be competent to advise on the objectives of the system in meeting both the longer-term needs of scholarship and research and the shorter-term manpower needs of the country. It would likewise be able to advise on the total level of finance required for higher education and on the broad allocation between sectors of both funds and student places.

At the second level the local authority sector presents formidable planning problems comprising: as it does approaching 400 institutions ranging from the larger polytechnics with more than 10,000 full-time, part-time and short-course students to small local colleges with fewer than 100 students in higher education. The sector presents the additional problem of strongly vested interests in maintaining this dispersion of effort and resources. Such interests are bound to run counter to effective planning in a period of retrenchment when the ensurance of quality and innovation in the sector point to the need for a substantial measure of rationalization and concentration of effort.

If, therefore, the NAB is to show itself capable of rational planning with reference to national and regional needs in higher education rather than doing little more than achieving an unsatisfactory compromise between vested interests, it will need to grasp a number of opportunities at the sector level of which three are of special importance.

First the structure, terms of reference and membership of the NAB and its component board and committee, will need to reflect more closely the nature of the system which it is controlling. In particular it will need to provide for membership in their own right, at both board and committee levels, of distinguished figures with an acknowledged concern for higher education drawn from fields of employment in industry, commerce and the professions.

Second the quality of the procedures by which information is sought, analysed and decisions arrived at must be improved and made demonstrably so in the papers, deliberations and minutes of the NAB. In the exercise just concluded, the overwhelming impression was that information was sought before fully determining how it might be used and that information given to the NAB was used out of context and at times to rationalize recommendations made on inadequate grounds.

The seriousness of the problem is exemplified by the extraordinary way in which the 10 per cent retrenchment proposals sought from institutions for 1984/85 were in fact subsequently used as "bids" for student places and funds. At a more detailed level, the confusion and in-fighting evident in dealing with town and country planning must not be repeated. Likewise, it is hoped that institutions will in future not be placed in the unfortunate and anomalous position of one polytechnic which was instructed to cease to recruit to two degree courses in technology and science, notwithstanding the CNAA's attestation of their quality and the fact that their continuation was in accord with the stated planning priorities of both the Secretary of State and the polytechnic.

Third a strategic planning framework must be developed which has agreed objectives which are demonstrably in keeping with the needs of scholarship and research on the one hand and the practical needs of the country on the other. Within such a statement of objectives it will be necessary to examine carefully and to define the most appropriate set of institutional roles and so to bring a necessary degree of system to the present confusion within the sector, without introducing a false rigidity. Three essential roles require consideration.

(i) Major institutions with interlocking national and regional roles based on a broad and mutually supportive range of departments require separate recognition. Such institutions are capable of providing a rich and varied educational context for the student and of responding to the industrial, commercial, professional and community needs of the region at all levels of higher education. These institutions are mainly but not solely the polytechnics.

(ii) The reality of the situation rather than any clear educational objective suggests that a continuing role will need to be found for some of the small and specialized institutions which have established a significant national reputation. However, in the interest of assisting such colleges to sustain an ongoing role and in order to provide their staff and students with the stimulus of contact with a wider range of activities, they should be expected to develop close working links with an adjacent major institution.

(iii) The local authority system has traditionally discharged an important local role in higher education (as well as further education) analogous to that of the community colleges in parts of the United States and Canada and to the regional colleges in Norway. This role evidently requires rethinking, given the likelihood of an increasing demand for courses from those, including the unemployed and early-retired, who may be expected to seek both leisure and vocational education.

It would appear appropriate on grounds of both need and economy to limit the level of such provision to sub-degree and particularly part-time courses with arrangements for the more ambitious students to progress to advanced courses in the major institutions. The latter institutions (and notably the polytechnics) do, of course, already meet this local and community need in the larger urban areas. However, it would be appropriate to secure a greater density of such provision by rethinking or extending the role of those colleges of further education which are suitably located. In so doing, it might be appropriate to merge with such colleges (as an alternative to closure) some of the adjacent, diversified colleges of education which would be unable to sustain an ongoing role of the present type in a period of retrenchment and changing demography.

It is significant that the NAB, in arriving at a late stage and under substantial pressure, at a method of allocating the pool for 1984/85 which took some account of the important relationship between resource requirements and scale and level of activity, found it necessary to identify three groups of institutions. Such distinctions can and should be thought through on a rational basis related to definitions of role and to the number of institutions within each group which can be sustained on an ongoing basis without detriment to the maintenance of appropriate standards.

At the third level of the individual institution the NAB will need to think through and establish with the local authority associations the conditions of administrative control necessary for the fully effective conduct of higher education in the public sector. Such conditions will need to show a balanced regard for issues of public accountability on the one hand and issues relating to the operational efficiency and responsiveness of institutions on the other.

In this respect, it is encouraging to note that the chairman of the NAB board has now publicly stated his belief in the need for the polytechnics to be accorded corporate status. His statement is a reflection of the fact that this issue is particularly serious for major institutions which have to compete within the demanding market of national provision and which need to have the freedom of action to make sensible arrangements with industry and commerce and with their local universities.

Therefore, the NAB should pursue three opportunities for change on behalf of its major institutions.

First, the introduction, through a new strategic planning body, for higher education as a whole of an agreed set of units of resource for given types of course in order to ensure that the needs of all students can be met appropriately. Beyond this conservative component of funding, differentiation between institutions would be necessary in relation to the scale of funding for research and in relation to costs specific to a given institution or group of institutions.

Second, the inception of a system of broad programme approval for courses based on criteria which reflect the essential strengths of the sector including its established concern to be responsive effectively and quickly to well-defined public needs for higher education.

Third, the granting of an appropriate form of corporate status within the local authority framework to major institutions in order to give them both the responsibility and the operational freedom to manage their affairs through their (reconstructed) governing bodies in a fully efficient and responsive way. The most appropriate solution for all the interests concerned would be for the NAB, local authorities and governing bodies in discussion with the DES, to seek chartered status for major institutions. This would provide such institutions with the opportunity to excel to the fullest possible extent both academically and operationally in effective cooperation with industry, commerce, the professions and their local universities. It would also provide more appropriate recognition of the standing of higher education provided in these major institutions and in the sense that chartered institutions would by convention be entitled to award their own degrees, they would cease to be handicapped in this respect in attracting able students who wish to pursue the type of courses which they offer.

The granting of charters to major institutions in the local authority sector would rebound greatly to the credit of their local authorities. The provisions of charters could appropriately reaffirm the role of these institutions. Charters could also define the composition of the institutions' governing bodies and their responsibilities in discharging their role of public accountability. The question of external validation for courses could also be dealt with in the provisions of the charter, should it be felt that this matter could not be left to the good sense of the academic boards and governing bodies of the institutions.

At the fourth level, of fields of study and research, strategic planning framework which identifies an appropriate set of institutional roles will also provide the opportunity to set out an effective policy for research and consultancy; an unambiguous statement on the general as well as the particular intellectual merits of vocationally orientated degree courses; and a reasoned basis for redistributing resources from over-provided to under-provided fields of study.

An effective research policy will need to recognize the substantial importance of the close links in the public sector between much research and "in company" consultancy. Direct industrial and professional experience by staff is as important as research in institutions with a strong vocational emphasis. Its importance, for example, to engineering was well argued in the Finniston report; and the significance of the consultant teacher in medicine is well-established. A research policy will also need to provide for an extension to the public sector of the dual support system, coupled with an increase in selectivity in research funding in higher education as a whole. Excellence in research is sufficiently rare and important to be nurtured appropriately wherever it develops.

It is clearly open to the NAB (as it has been in the past) to affirm, in step with the general advice of the Secretary of State, that its sector of higher education has a highly significant role inpreparing students directly for professional employment in the private and public sectors of the economy. In so doing it extends the original set of professional courses (for the law, medicine and the Church) which represent the oldest tradition in higher education, to meet the needs of an increasingly complex society and technology.

The preparation of students directly for professional life demands the effective integration of theory and practice in solving problems of the real world. It is thus fully capable of developing the general as well as the particular qualities of the student's mind including an ability to assess the ethical and socio-economic implications of these problems.

The establishment of a reasoned basis for redistributing resources from over-provided to under-provided fields of study will need to flow from the definition of institutional roles. By so doing, it will be possible to seek a greater measure of concentration on institutions capable of achieving a high degree of cost-effectiveness coupled with quality and capable also of providing students with a varied learning environment. Four fields of study require particular consideration:

(i) The working party of the National Advisory Body on Art and Design pointed to a high level of student demand. However, the opportunity costs of meeting this demand fully and in so doing, maintaining a widely dispersed set of centres, many of which are relatively out of touch with important supporting fields, such as engineering, computer studies and business studies, may have become too high.

(ii) It is generally accepted that the quality of teacher education has suffered from being conducted in relative isolation. A greater concentration on the major institutions would remedy this and would bring the students into contact with fields of study and research related to the industrial, commercial and professional life of their regions. It would also ensure that a higher proportion of future teachers were educated within an urban context and thus in a situation of the type in which they are most likely to teach.

(iii) The past rationalization of teacher education led to the widespread development of "diversified courses" given for the most part by staff trained for other purposes. This policy was established in a period when forecast student demand had been less carefully analysed. In present circumstances both the long-run demand for, and the opportunity costs of providing, such courses appear to require very careful examination.

(iv) The merger of colleges of education with major institutions and the associated redeployment of staff brought about a substantial increase in the size of departments of humanities. Some very high quality degree courses have emerged and are recruiting strongly; they also make possible the provision of important "service" teaching to vocationally orientated courses. However, it will be necessary for the NAB to consider the scale of investment appropriate in the humanities given the demand for resources and for student places in science, technology, professional and business fields.

In discussing a range of important opportunities which are open to the NAB, I have referred to the strongly vested interests with which it will have to deal. In realizing those opportunities it will, therefore, be necessary to identify the essential and very real strengths of the public sector and to show how they can be supported most effectively. To achieve this on a well-considered basis will require the formulation and public discussion of a strategic plan for the sector.

This plan will need to address the essentially transhistorical issues of many of the most important issues of higher education and the necessity, therefore, for an overall strategic planning body; it will need to indicate ways of overhauling the structure, membership and the procedures of the NAB itself in order to make it more appropriate to its task; it will need to identify key roles and groups of institutions capable of discharging these roles on an ongoing basis; it will need to secure for major institutions the responsibility and the operational freedom necessary to enable them to excel fully in a highly competitive situation; and it will need to develop a conception of research funding and course planning which is consistent with the fully responsive operation of that sector of higher education which is intended to interact most closely with industry, commerce and the professions.

The task of producing such a plan requires imagination and leadership of a high order and it needs to be based on consultative procedures and information of the highest quality. Given that such a plan can be achieved, it may be expected that the local authority system and its institutions of higher education will be able jointly to move forward to achieve a more central, more effective and more clearly recognized role in the total system of higher education.

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BOOKS

Imagination and understanding

by Olivia Harris

Ruth Benedict: patterns of a life
by Judith Modell
Chatto & Windus, £15.00
ISBN 0 7011 2771 6

Ruth Benedict

For most readers the name of Ruth Benedict is probably closely associated with that of Margaret Mead, her youthful student and lifelong friend whose output, achievements and versatility tower over the older woman and give her a sure place in the intellectual history of the twentieth century. Until the publication of this new biography the only substantial accounts of Benedict were those by Mead herself – *An Anthropologist at Work*, published in 1959, and *Ruth Benedict*, published in 1974.

In reality, the achievements of the two women are closely intertwined. As Mead remarks in her own autobiography, in the early years of their friendship for each the other was the only person who had read everything the other had written, including not only early drafts of anthropological work but also poetry and personal writings. One of the reasons it is hard to disentangle Benedict from Mead is that while Benedict published a good deal, it is clear that a significant part of her impact was personal, and that her contribution as a teacher is probably as great as that of her writings. Sidney Mintz, himself a distinguished US anthropologist, recounts in a recent article for example that his decision to become an anthropologist on returning from the Second World War rested on a single lecture he heard Ruth Benedict deliver.

Benedict was a close friend and collaborator of Franz Boas, who in ways rather similar to Bronislaw Malinowski in this country made a vital contribution to the development of US anthropology in the first decades of this century, and lived the discipline almost as though it were a military campaign, or a religion. Based with Boas in the tightly-knit department at Columbia University, Benedict was highly influential not only on the students but on the general public as well. If there is something enigmatic about her, it is undoubtedly connected to her particularly feminine presence as a woman. In practical terms, she was only accorded proper professional recognition right at the end of her life, and had to suffer the familiar indignity of seeing a man she profoundly disagreed with appointed as head of the department after Boas retired, since it would have been too risky to appoint a woman.

But apart from the bare facts of her biography, Ruth Benedict's voice is that of a woman in a more important sense. It is surely no accident that the two most successful popularizers of the discipline in the English-speaking world were women. She and Mead combined intellectual brilliance and imagination with a sound sense of the ordinariness of life and were thus able to communicate with the general public in a way that Boas could never do. In doing so they were not simply reproducing in a more accessible form the work of others, but forging their own vision of anthropology and its central role in contemporary life.

In the case of Benedict, the feminine quality of her work can perhaps best be summarized in terms of her profound awareness of the connexions between her emotional life and her scholarship. As Modell puts it, in classes she taught not so much ideas as a "frame of mind". Ideas themselves were tied closely to experience, but this for Benedict was not a simple empiricism but required the conscious effort of the writer towards greater self-awareness. Her views are expressed cogently and persuasively in the classic *Patterns of Culture*, published exactly fifty years ago. The book was an instant success, and has remained a standard introduction to anthropology ever since (though not in Britain). She argued that cultures were artistic wholes, and that the diversity of world cultures should be treated with the sort of respect and imaginative engagement that is accorded to works of art. In her vision, each culture is akin to an artist, selecting qualities and orientations from the infinite variety of possible elements in much the same way as a painter chooses colours from a palette, or a poet selects images and words from the vast storehouse of language. This approach is most successful in her famous contrast between the "Apollonian" and the "Dionysian" cultures of the American south-west. The Pueblo Indians whom she herself had studied strove for aesthetic order through ritual performance, and valued restraint in personal behaviour, while the surrounding Plains cultures were oriented to ecstasy and the transcendental, and valued excess and the extraordinary.

Her arguments, while intuitively attractive and persuasive, seem curiously disembodied and voluntaristic. Her use of the term "selection" for example is a far cry from Darwin, involving not grand unconscious processes but almost conscious choice on the part of the "culture". What is more, cultures were assessed as aesthetic products, and some were found wanting in her demanding aesthetic canon. Of the cultures of the interior tribes of British Columbia for example, she writes "nothing is carried far enough to give body to the culture". It would appear then that there were limits to her cultural relativism.

Her plea for the importance of understanding cultures as integrated wholes arises as a reaction to the prevailing atomistic and particularistic methods of the time. Where other anthropologists – including Boas – had collected lists of cultural "traits" she quotes with approval the arguments of Gestalt psychologists to demonstrate that a culture is more than the sum of its parts. It is also important to understand the social and political milieu in which US anthropology developed, and which led to an emphasis on cultural difference that stands in marked contrast to the primary preoccupations of the discipline in European countries.

For Europeans the "savage" was truly other, for all the analogies drawn with the lumpen proletariat, the backward peasant, the child or the mental defective of Europe itself. In the so-called New World the native inhabitants were there, in some areas reduced to a pitiful fragment of their former glory, in others still pursuing their own livelihood in relative independence, and in others the memory they had posed to white settlers still fresh in people's mind. Their presence raised issues of national identity quite different from the confrontation of Europeans with colonized peoples. In addition, the heterogeneity and ethnic mixing of American society gave a quite different emphasis to the issue of cultural diversity than did the relative homogeneity and regional identification of ethnic populations in Europe. As a result culture, understood in the broadest possible terms, became a central concept in US anthropology. Eric Wolf has described the discipline of the 1920s and 30s – the time when Benedict was drawn into it and made her mark upon it as grounded in the "faith in human malleability, seen as nearly infinite: the educational process as an Aladdin's lamp of progress: democratic pluralism as the American way; and an unconcern with power and its nature". By contrast British anthropology as it developed in the middle decades of the century was preoccupied with the social organization of the peoples studied, an issue closely tied to the needs of colonial administration, whether by direct or indirect rule. It is hard to imagine a British anthropologist writing *Patterns of Culture*, or Mead's *Sex and Temperament in Three Primitive Societies*.

Ruth Benedict, like Boas, had a firm and growing commitment to combating racist ideology throughout her life, and saw the educational qualities of the anthropological vision as a means to achieve this end. She held firmly to the belief in the power of the individual imagination to remake reality, and appears to have treated economic and political interests as too obvious to need spelling out. She was above all an educator, concerned to change people's attitudes. This idealism is nowhere more obvious than in her own life. She was acutely aware of the restrictions placed on her as a woman – before she discovered anthropology in her early thirties she decided to write a study of three "restless and highly enslaved women of past generations", Mary Wollstonecraft, Margaret Fuller and Olive Schreiner. But their different brands of militancy were not for her: her greatest battles appear to have been fought with herself, her greatest enemy her own excessive emotions. Pessimism pervaded her life; she was unable to break out, partly because of the deafness that had afflicted her since measles in babyhood, but in large part also because her ideal was restraint, calm and control. As she noted characteristically in her journal: "My conclusion so far as I see it now is that there is nothing 'new' about the whole thing – that the restlessness and groping are inherent in the nature of women".

It has often been pointed out how significant a contribution women have made to the development of anthropology compared with other related disciplines. Anthropology offers the possibility of making out of the experience of marginality, of being a misfit, an objective study. It privileges the voices that are normally suppressed, and thus provides scope for the particular insights of those who feel themselves to be marginal. In the case of Ruth Benedict the personal and the professional were integrally intertwined, but not in the confessional sense: rather in the ways that she tried to make of her own life an integrated whole, a "pattern" founded in the significant contrasts, the basic themes of her own life experience. There is something in common with the French writer and anthropologist Michel Leiris, although his work is more directly confessional, and mixes systematically literary and pedagogical intent in a way that Benedict does not.

The "personal" note in her writing is not at the level of anecdote but in the central place she attributes to the imagination. In order to comprehend fully one must "participate vicariously" in another's experience. She supplemented her own poetic style with frequent quotation from native myths and statements, and quotes Dilthey as a source for her own approach. The focus is on interpretation, not on explanation; nothing can substitute for the imaginative leap required to understand the other. This remains a key issue in anthropological writing, and in recent years there has been something of a return to the emphasis on imaginative understanding, in contrast to evolutionary, functionalist and Marxist schools. All anthropological writing, however much it tries to establish laws of general validity, has to confront the issue of translation, since it is typically the presentation of the experience, the voice of those whose voice is rarely heard, and for whose transmission there exist no regular and well-established channels.

Benedict's lasting contribution is then perhaps to remind us that we cannot do without the imagination, the poetic intuition, in anthropological work. But whatever her skills as a teacher, such qualities are bound to remain idiosyncratic, and it is not entirely surprising that her style of doing anthropology came to an end with her death in 1948. Her anthropology was her own self embodied, and she drew explicit parallels for example between the Apollonian and Dionysian contrasts in the cultures of the southwest and the two conflicting sides of her own personality. This approach for all its insights and sensitivity in the end has something monstrous about it, and comes dangerously close to an almighty solipsism in which world cultures become a grandiose projection of inner emotional conflict. In spite of her strictures in *Patterns of Culture* against extrapolating from small-scale homogeneous social groups to large class-divided societies, she herself ended up doing precisely that, especially during the Second World War when along with other anthropologists she worked in Washington on studies of "national character" and wrote her famous "ethnography at a distance" on Japanese culture – *The Chrysanthemum and the Sword*.

Modell's well-written biography addresses itself particularly to this aspect of Benedict: the achievement of "pattern" in her life and the linking of her personal emotional life to her anthropology. She takes as her method Benedict's own views on the relationship between life and writing, and thus presents her life in terms of her own perceptions of it. She tells us a great deal about what it felt like to be Ruth Benedict; the book is a good example of a particular genre of biographical writing, but the problem is that Benedict felt trapped and unfulfilled much of the time, with the result that the book itself feels trapped. Trapped in a vision that we have now moved beyond; trapped in a female world of self-punishment that feminism has offered an escape from, or at least argued its possibility. In its faithfulness to its subject Modell's biography offers us no way out. In one respect she may even have been misled by Benedict's autobiographical writings. She suggests that in the comparison of Apollonian and Dionysian cultures, Benedict's sympathy was with the Dionysian, the ecstatic and emotional. However the picture she herself presents of the woman and which is confirmed in other portraits is typified by phrases such as "calm strength" responsibility, passionate humanitarianism. She is described as formal and composed, aloof and cold, self-contained, careful. The inner conflicts were not acted out in her life, or rather were only allowed expression in an ordered aesthetic form. This picture is the essence of the Apollonian spirit as Benedict herself describes it: Nietzsche surely never suggested that the Apollonian lacked emotion, but rather that this style emphasized its channelling and control.

As a portrait of a woman, then, this new biography is eloquent and perceptive: in the end however it hardly endears one to the anthropologist of whom many spoke in terms of awe and adulation. To explore Benedict's contribution, both as woman and as anthropologist, we need more distance and detachment than Modell has been prepared to give.

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BOOKS

Removing layers of mystery

A. E. Housman: a critical biography
by Norman Page
Macmillan, £17.50
ISBN 0 333 343808

Housman has sometimes been likened to Swift and to T. E. Lawrence, as men pre-eminently gifted, who show themselves contemptuous of the admiration of others, yet eager for fame upon their own terms, and strangely indifferent to the gift of life itself. A quotation concerning Swift seems especially apt. "A man of rigorous temper with that vigilance of minute attention which his works discover . . . Not a man to be loved or envied. He seems to have wasted life by rage of neglected pride and the languishment of unsatisfied desire." Unlike Swift, but like Lawrence, Housman's life-style generated a mythology, which both men at once ridiculed and encouraged.

Biographers have thus had to start by removing layers of mystery before serious portraiture could begin. When Housman died there were three especially mystifying areas in the record. He had said that he did not begin to write poetry in earnest until the really emotional part of his life was over. First, then, what were the experiences which had shaped the deeply pessimistic and stoical view of life expressed in *A Shropshire Lad* (1895)? Why, given the steady popularity and the technical assurance of that first slim volume, did he publish no more verse until he was sixty-three? Third, why did the greatest Latin scholar of the age devote thirty years to editing the text of Manilius, the author of a versified treatise on astronomy and astrology of negligible poetic or scientific value, thereby sacrificing work on Propertius, arguably the greatest of Roman lyric poets, for whose writings he cared far more?

Housman's early twenties were blighted first by failing his finals at Oxford, then by the collapse of his father's health and practical capacities, which made Alfred, as eldest son, the responsible head of a large family. But the factor which dominated his entire adult emotional life was his unrequited love for his Oxford fellow-student, Moses Jackson. Housman's crucial inner drama of the 1880s, Professor Page concludes, centred upon "an unrewarding quest for a permanent and satisfying relationship". He also

A. E. Housman, a drawing by Francis Dodd, 1926

calls attention to the Labouchère amendment to the Criminal Law Amendment Act (1885), which made all homosexual acts between males illegal: thereafter the relationship which Housman cherished above all others became potentially criminal. At that date, the author notes, Housman suddenly left the London lodgings he had shared with the Jackson brothers. Hence the mask of impenetrable reserve and self-sufficiency which he wore throughout his life.

These factors also conditioned his poetic output. His major ambitions and his livelihood lay in scholarship. Poetry offered an outlet for expressing the inexpressible, but the poetic process, Housman admitted, was agonizingly disturbing: it could be practised only as an accomplishment, not as a vocation with power to shape his career. Thus the verses written at sixty or later display the same qualities, wonderfully unimpaired but also undeveloped, as those of his youth. His second creative period, which culminated in *Last Poems* (1922), was precipitated by the terminal illness of Moses Jackson.

Although much of the essential material had been unearthed in recent years, Professor Page can fairly claim that none of his predecessors has managed to write a satisfactory biography. His own is especially valuable for its assessment of Housman's scholarship and of the academic climate of his life-time: for, in effect, even during the years in the wilderness spent at the Patent Office, Housman always lived in academe, from his arrival at Oxford in 1877 to his death in 1936. The chapters on Jowett's Oxford, *fin-de siècle* University College London, and Georgian Cambridge (1911–1936) set Housman's achievements and ideals for the first time in a complete perspective. This approach helps to explain not only his Oxford debacle, but also his isolation from new developments both in classical and in English studies in Cambridge between the wars.

Concerning his choice of Manilius, we have to remember both his dedication to accuracy and the special nature of his editorial gifts. The ideal material for a textual virtuoso may be – to put the extreme case – a text nobody wants to read: but once the textual critic embarks upon literary judgments, there is the awful warning of Bentley's edition of *Paradise Lost*. Manilius's texts had engaged the intellects of the greatest of Latinists, Scaliger and Bentley, and Housman was determined to complete the task in his lifetime. He saw here "a better chance of approaching finality" than with Propertius – even before he was thirty he feared that his work on the latter might be forestalled by others.

Professor Page is certainly more judicious in his handling of biographical evidence than some of his predecessors. On this score he repeatedly criticizes Richard Graves, whose study is, by comparison, uncritical and too often dominated by anecdote. Yet Graves has certainly added to our knowledge of Housman, and Page himself omits to mention B. J. Leggett's excellent *The Poetic Art of A. E. Housman*.

A final chapter surveys the poetry and comments acutely upon individual lyrics, but is more interesting for its view of Housman's place in literary history and its account of *The Name and Nature of Poetry* lecture. This is rightly discussed not only as critical theory but also in relation to Housman's convictions concerning scholarship. It was inevitably received as an assault upon contemporary Cambridge literary criticism, a last stand in defence of the Romantic conception of poetry, yet it was in fact written with great reluctance, and is far from developing a complete critical case: it is in part an oration, composed with wit, rhetoric and provocative emphasis, in part a poet's testimony on the experience of composition. Housman always held that literary criticism was the rarest of gifts, that he did not possess it, and that as generally practised it had no more authority than personal taste. This was not false modesty, but rather reflects his passion for certainty and exactitude: in suppressing a literary paper of his own, he had once said, "I do not say it is not good: I say it is not good enough for me."

Housman's poetry came to be associated – wrongly – with that of the Georgians, as the elegist of a vanishing England, and his reputation eclipsed by the advent of the modern movement. Because he employed a traditional diction and a narrow range of regular metres, his verse was assumed to lack either the depth or the complexity to repay close study. But taste has switched from the transparent ambology pieces to such enigmatic lyrics as "When the bells justle in the tower", in which powerful emotions clash beneath the surface meaning. Recent critics – Bateson, Empson and Ricks – have discovered a linguistic energy and a sharpness of focus which are worlds away from the fluceidity of so much late Victorian and pre-1914 verse, and such a change in reading habits must be to Housman's advantage.

"He very much lived in watertight compartments that were not to communicate with each other", wrote Housman's sister. The present biography bears out that view and throws most light on the academic compartment.

Ian Scott-Kilvert

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Heroic examples

Yeats's Heroic Figures: Wilde, Parnell, Swift, Casement
by Michael Steinman
Macmillan, £20.00
ISBN 0 333 34382 4

Michael Steinman's book seems at first sight rather restricted in choosing only four figures from Yeats's life-long love affair with heroism and the heroic type.

His admiration of Cuchulain is a special "literary" case, but speaking of John O'Leary, with his "magnificent head" and his integrity, Yeats states that "it was through the old Fenian leader . . . I found my theme". Robert Gregory is celebrated in two great poems as the completely realized hero. Burke, Berkeley, "that inquiring man" John Synge, Maud Gonne and others, press forward for inclusion in Yeats's heroic pantheon. However, it is Steinman's thesis, on the whole sustained, that Wilde, Parnell, Swift and Casement "were essential . . . because they resembled Yeats's heroic conception of himself".

The weakest part of the book is on Roger Casement. He was not really of interest to Yeats until the 1936 publication of Maloney's *The Forged Casement Diaries*. The blackening of his name became useful corroboration for Yeats's belief that "politics as the game is played today are so much foul lying"; more importantly, the case may have triggered that willed rage in Yeats which – along with lust – he felt he needed to spur him into song as he grew older. There is no evidence that Yeats was interested in Casement's personality, and as if realizing that Casement does not exemplify his theme very well, Steinman nervously calls his short Casement chapter an "appendix".

Wilde was important to Yeats, and Steinman rightly insists that Yeats was more interested in the man – or the mask – than in Wilde's writing, with the exception of *The Picture of Dorian Gray* and *Intentions*. Yeats saw in the brilliant dandy conversationalist an enviable poise which contrasted with his own early feelings of Irish inferiority; he linked him, as early as 1891, with "all the reckless braggadocio of the eighteenth century in Ireland", that century which was to figure so largely in his later imagination; and above all, it was Wilde's life, as much as his aphoristic theorizing, which influenced crucially Yeats's doctrine of the Mask. As AE said in a 1916 letter: "W.B.Y. began twenty years ago vigorously defending Wilde against the charge of being a poseur. He said it was merely living artistically, and it was the duty of everybody to have a conception of themselves, and he intended to conceive of himself. The present W.B.Y. is the result". Steinman writes perceptively and illuminatingly of all this.

The chapter on Parnell trudges over some well-ploughed ground, though surprisingly there is no reference to Herbert Howarth's *Literature under Parnell's Star* (1958). The portrait of the Protestant aristocrat "attacked by the mob, the Church and the state" is a familiar one, and the reasons for Yeats's attachment to (or creation of) that portrait have been copiously documented. Steinman's painstaking chronological method does, however, enable us to understand clearly how Yeats moved from seeing the historical Parnell as a force that had submerged Ireland in sterile political rancour to the vision of Parnell as heroic martyr.

Swift played a major role, especially from 1922 onwards, in reinforcing Yeats's anti-democratic stance. Steinman focuses at rather too much length on the *Words upon the Window-pane*; but what is fresh and interesting is his account of how Swift's poetry was one of the influences on Yeats's "later manner". Swift offered Yeats a rhetoric which contributed to the "concreteness, directness and boldness" of the public poetry which lashes fool and knave.

This is a modest but useful book. It bears too much the marks of its origin as a dissertation, and would have profited from taking a wider perspective; but it is good to be reminded again of Yeats's central engagement with personality.

George J. Watson

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Pilgrims' progress

The Structure of the Canterbury Tales
by Helen Cooper
Duckworth, £24.00
ISBN 0 7156 1718 4

Criticism, declares Mrs Cooper, has tended to avoid "two very obvious facts – that the *Canterbury Tales* is a series of stories, and that they are brilliantly written". One may feel that this is a mere "Oxfordism" (ie a magisterial statement, delivered often with a faintly nettled tone, of something always abundantly clear to everyone). However Mrs Cooper's first fact takes on more interest when one realizes that the stress is meant to fall, not on "stories", but on "series". She believes that reading one tale alone is as foolish, almost, as reading Bottom's play of Pyramus without *A Midsummer Night's Dream* or the Murder of Gonzago without *Hamlet*. Context is vital; sequence is very important; character, and the other old standby "relation of teller to tale", are mostly modern aberrations.

In this there is contentious material enough. To begin with sequence, how far can one trust the order of the tales given by the Ellesmere manuscript, which Robinson's edition and this book both follow? Mrs Cooper will have nothing to do, quite rightly, with Professor Blake's recent thesis that the Hengwrt order is the authoritative one, citing Larry Benson's 1981 study against him. However, that study, final as it does seem to be, concludes with the words that the order Chaucer meant, the only one we ought to consider, is nevertheless "imperfect and blemished"; Chaucer simply did not finish the *Canterbury Tales*, and for the least arguable of reasons, namely death. How far, then, is one merely indulging in critical *finesses* by demonstrating the "resonances" single tales acquire from their neighbours? If the order were different could subtle clerks not find reason in that too?

Mrs Cooper is aware of these thoughts, and tries to overcome them, quite properly, by multiple demonstration. Often what she says carries conviction. Though not her idea, it is a good idea to see fragment VII (B2) – the tales of Shipman, Prioress, Chaucer, Monk and Nun's Priest – as "the Literature Group"; little though one might think it from reading the rude puns of the Shipman in isolation. In view of Blake's recent dismissal of the Canon's Yeoman's Tale as non-canonical, it is also interesting to see that bolted firmly into place as match and opposite of the Second Nun's Tale (especially if the one is very late and the other very early). The notion of "authority" and "experience" running through the sequence Wife of Bath, Friar, Summoner, is also attractive, much more so than the old notion of "the Marriage Group" which ignored that sequence entirely. However at that point one may also want to check back to the discarded idea of "character". Why *did* Chaucer decide to tell the Friar's Tale?

Was it fascination not with the character of the friar's butt, the summoner: that agent of the church who hears Latin all day in court, but retains only verbal fragments of it, devoid of meaning – and who responds with exactly the same incomprehension (so the friar implies) to words of faith, like "God" or "conscience", or "feend" or "helle"? This would explain the choice of the tale, and the relation to the General Prologue. It would remain true that Chaucer had matched Friar's Tale to Wife of Bath's with a view to bringing down the latter's final level of idealism; very likely, further, that he had seized the chance of opposing two stories with similar layouts (forest, supernatural creature, contract) but opposite presuppositions, the same devices as used for Knight and Miller. The question one is left with, though, is which was more important to him, tale (and teller, and target), or structure? Are the connexions this book uncovers those of deliberate plan, or of inspired opportunism, the kind of opportunism indeed which so many authors feel coming upon them once a complex work has started to gain momentum?

The latter remains a possibility, and keeping it in mind helps one to retain both that sense for the individual tale which Mrs Cooper's *Gonzago* image tends to blur, and for the tale-connexions which Chaucer never made, but perhaps would have liked to. There is no denying, for instance, that the Merchant comes after the Wife of Bath. Still, his tale shows the failure of one solution to the problem of jealousy – always keep your hand on her – which the Wife of Bath is to reject and build on. In the same way the Franklin, one might say, takes the Wife of Bath's solution and queries that in its turn. The order of tales as we have them makes nothing of these connexions. But the Merchant's Tale *might* have gone earlier, the Wife of Bath too has been changed round . . . Once more, the fact is that Chaucer never really finished his poem.

This study is an illuminating one, and it does have the great merit of considering the porridge (*Melibee*, Physician, Manciple and so on) as well as the very familiar A level set text plums. It is not "close reading", it rejects the notion that Chaucer ever had failures, and it dismisses "trite little moral fruits" and "pat little final maxims" while occasionally bouncing one out itself (page 221: "Chaucer's characters . . . are always treated as people first").

In one assertion it is surely right: namely that Chaucer meant the *Canterbury Tales* as a *summa narrationum*, an encyclopaedia of medieval genres with the novel, as it were, tucked into the gaps between them.

T. A. Shippey

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BOOKS

A gloomy outlook

The Conditions for Economic Recovery
by John Cornwall
Martin Robertson, £19.50 and £9.95
ISBN 0 85520 315 3 and 350 1

This book appears to be borne of the author's frustration with recent developments in economics and economics. One can sympathize while regarding frustration as an inadequate basis for a book which purports to be, and is written as, something more than a polemic.

As it is, this is a depressing book – though it offers one a choice of sources of depression. The first option is to take the argument at face value and to be depressed, as is the author himself, by his "formidable" list of necessary requirements for recovery (apparently not even collectively sufficient): a permanent incomes policy; more government intervention and industrial policy; strong conciliatory political leadership (everywhere?) based on trust and cooperation; the restoration of norms of honesty and fairness in private commercial behaviour; internationally coordinated expansionary policies accompanied by commodity price stabilization programmes and adequate long-term lending to oil importing (developing?) countries from a reformed (liberalized?) International Monetary Fund.

At another level the book is depressing for what it reveals, and displays, about the state of economics. One does not have to be a Dr Pangloss to be sceptical of Cornwall's pessimism either about his colleagues or the world; one can find grounds for scepticism in the analysis underlying his attack on neoclassical economics.

He starts by criticizing the assumption of flexible (endogenous) prices and given (exogenous) tastes and technology. These assumptions are, of course, questionable; but Cornwall's attempt to rationalize their reversal, in a rather Galbraithian manner, is unconvincing. He relies on a mere (if plausible) assertion that the pace of technicnt change in the industrial revolution "was closely related to economic conditions" and seems to regard "households re-allocating their budgets towards newly available goods with high income elasticities" as controverting the postulate that *tastes* are given.

Much of Cornwall's argument depends on an alleged "inflationary bias" having emerged in the market capitulist economies of the postwar period. This concept I find problematic – though not original. Clearly the monetary authorities of the various countries might have an "inflationary bias"; tending systematically to prefer, perhaps on the advice of economists like Cornwall, to take risks with inflation rather than with unemployment. This, as we know, will lead to *accelerating* inflation, as it is only inflation to some degree unexpected that will affect aggregate demand and output. What, I think, people who use the term refer to by an emerging inflationary bias is what many neoclassical economists would refer to as an upward drifting natural rate of unemployment. The difference is important in suggesting different causes and policies.

The natural rate might rise because the relevant tastes and attitudes change (a possibility Cornwall must admit), or because technology changes in a way which makes matching people to jobs more difficult, or labour market institutions may have become more rigid, or, as Cornwall recognizes, there may be effects from unemployment insurance benefits. Whatever one's view on the relative importance of these factors it is unlikely that one would respond to what was perceived as a drifting natural rate by advocating Cornwall's remedies. His criticism of natural rate doctrine is unconvincing: while he is justified in questioning a number of assumptions (market clearing, voluntary unemployment) on which it has been derived (and even more strongly – but less relevantly – the particular information asymmetry underlying the "Lucas supply function") he does nothing to explain how persistent, non-accelerating, inflation, would change anything – such as the social forces which are alleged to account for the inflationary bias.

A similar argument suggests that persistent and fully expected productivity growth at an enhanced rate is unlikely to act as a solvent of the social problems alleged to generate inflation and unemployment. This proposition in no way detracts from the argument, not very clearly articulated here, that deflationary policies, or adverse changes in the terms of trade, by frustrating real wage expectations, may contribute to *temporary* increases in both inflation and, particularly, unemployment. There is no reason to believe that there exists a *sustainable* rate of productivity growth high "enough . . . to attenuate distributional issues". On the other hand there is reason to believe that intervention in pursuit of such a goal will contribute to the politicization and intensification of the very conflicts its achievement is designed to diminish.

It is depressing that a book which more than once emphasizes the importance of understanding "the true nature of unemployment and inflation" should be so lacking in rigour in the presentation of alternatives to the neo-classical model. The weaknesses of naive supply side economics, and the unrealism of some assumptions invoked by some neoclassical economists, are easy targets. It is hard to deny a role for demand or involuntary unemployment. But a bunch of propositions generated in this way do not constitute an alternative theory – let alone the basis for a perception of the true nature of the economy. Nor, despite the deployment of considerable quantities of statistics, is a remotely complete quantitative account of the modern industrial economy presented.

This not very radical work might well serve as a conspectus of the process by which "the middle of the road" became the "soft centre".

J. S. Flemming

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Hyperinflation was a problem facing the Communist government in China in 1949. This picture shows a "gold rush" in Shanghai, when people crowded to change paper money into gold and many were trampled to death. It is taken from Caroline Blunden and Mark Elvin's *Cultural Atlas of China* (Phaidon, £17.50).

Downing tools

Strikes in Postwar Britain: a study of stoppages of work due to industrial disputes 1946–73
by J. W. Durcan, W. E. J. McCarthy and G. P. Redman
Allen & Unwin, £20.00
ISBN 0 04 331093 1

This is a thorough and detailed account and analysis of strikes in Britain during the first 27 years after the war, using data provided by the Department of Employment's records of reported stoppages. The authors recognize many of the deficiencies of that information but argue that it is adequate for their purposes.

In describing the pattern of strikes over the period the authors identify four sub-periods, beginning with 1946 to 1952, which were "years of industrial peace". There was a decline in the number of strikes, and those that did occur tended to be short, unofficial and small-scale. The period was followed by "the return of the strike" during the years 1953 to 1959, when the national official stoppage reappeared after an absence of 20 years, and when there was an increase in the concentration of strikes in the most strike-prone industries. The third period, 1960 to 1968, saw "the rise of the shop floor movement". There was an increase in the level of strike activity, an absence of long, official national stoppages; and the spread of conflict to sectors outside the traditional strike prone industries. The final phase, 1969–1973, is styled "the formal challenge". Strike activity rose according to all measures. An increase in both small unofficial stoppages and large official ones was supplemented by the emergence of new forms, namely medium-scale strikes and political strikes.

In looking for explanations of strike patterns, the authors attach little importance to macroeconomic influences, and most importance to the institutions for collective bargaining, to the role of government, and their interaction. Case studies of particular industries suggested to them that attention needed to be paid both to the reform of procedures for resolving disputes and attention to the source of disputes. Even then the benefits to be derived from both might be overturned by external factors. In particular government was important in providing the general climate to industrial relations, in promoting institutions for resolving differences and in providing particular industrial relations initiatives such as incomes policy and legislation on trade unions.

There is no doubt that this is an important and impressive book which will become a standard reference on strikes in Britain. It combines massive statistical analysis with the perspective of W. E. J. McCarthy (now Lord McCarthy) who was at the centre of many of the events or developments described. At the same time the work is flawed, first because by concentrating on strikes it fails to recognize an important development in *forms* of industrial action in Britain. It considers how far its analysis might be unsatisfactory because it focuses upon strikes and excludes all other forms of industrial action but concludes that "stoppages and other sanctions are interchangeable pressures". However, the recent DE/PSI/SSRC survey of workplace industrial relations found that there was a very marked contrast in the industrial and occupational distribution of strikes compared with other sanctions. Moreover, strikes were characteristic of sectors and occupational groups in decline while such action as overtime bans and working to rule were characteristic of groups that were growing in relative importance.

Secondly, the analysis largely ignores the results of such surveys of workplaces on the distribution of strikes and other forms of industrial action in relation to the characteristics of the workplaces where they occur. Clearly, when a strike is the result of some feature of a workplace then the workplace is the most appropriate level for identifying that feature. Analysis at the level of the industrial sector is a much cruder method of pinpointing influences upon local stoppages.

Thirdly, while the book does not set out to explore the consequences of strikes and, indeed, the authors argue that it is impossible to measure the effects of industrial action, nevertheless they cannot resist making some observations about impact, which tend to minimize the costs of strikes. For instance, they argue that strikes do not play a major role in wage-push inflation on the basis of the following reasoning: the earnings of workers whose pay is settled by collective bargaining are only slightly higher than those of counterparts whose pay is not negotiated. Strikes occur in relation to only a very small proportion of negotiations, *ergo* the mark up in pay gained from striking is tiny. Such reasoning ignores the dynamic in the pay round and unnecessarily detracts from the authority of the book.

W. W. Daniel

W. W. Daniel is deputy director of the Policy Studies Institute.

Wise after the event

Stagflation, volume two: Demand Management
by David Vines, Jan Maciejowski and James Meade
Allen & Unwin, £16.00 and £7.50
ISBN 0 04 339030 7 and 339031 5

The best writers about economics approach their readers with sympathy. They know their subject is not an easy one and they are concerned that an obscure vocabulary or unfamiliar mathematical techniques should not distract attention from the importance of the message they are trying to convey. In this they contrast with many journeyman economists who write only to display their own virtuosity. James Meade, who won the Nobel Prize for Economics in 1977, writes very well indeed.

This is the second of two volumes in which James Meade and his collaborators set out their design for a method of operating economic policy which will cure at the same time the two ills of inflation and unemployment. Here we are concerned with the management of aggregate demand, the problems of fixing wage rates having been considered at length in the first volume. The problem is seen, in large part, as one for the control engineer. The description of control theory is unpretentious and clear, but necessarily presupposes familiarity with some quite advanced mathematics. The performance of the economy is measured by unemployment, inflation, the balance of payments and the level of fixed investment. The aim is to maintain a satisfactory performance on all these measures by making timely adjustments to wages, taxes, interest rates and the rate of exchange. This requires the specification of "feedback" rules, telling those operating economic policy how they should move their various levers in response to danger signals of different kinds. Viewed this way managing the economy is an intellectually attractive puzzle, rather like some of the better games one can buy to play on a home computer.

Control rules are calculated, with the help of a simple mathematical model of the economy, based on that used for forecasting at the Treasury. The model is also used to show what might have happened to the economy over the period 1972 to 1984 if those control rules had been in operation. It is as if we could start again from the time things went really wrong, knowing what we know now. The results of this rewriting of history may not be economic bliss, but they certainly look far more attractive than reality.

Any model-based treatment of policy-making does, of course, have its limitations, as the authors would no doubt recognize. Our knowledge of the working of the economy is not precise, indeed there is notorious disagreement among economists about every aspect of it. We are promised that further work is to be done to test how robust the conclusions of this book are to the use of alternative models. That further work is certainly needed.

A more fundamental problem with any kind of economic engineering concerns the possibility that the behaviour of the economy, which the model tries to describe, will itself change if new policy rules are adopted. The announcement of targets for £M3 for example certainly changed the behaviour of financial markets and possibly the behaviour of businessmen more generally. Lots of my fellow-economists will be making this criticism of the book, because it is the fashionable point to make about any study that uses a econometric model to discuss policy rules. It may be a mark of their self-confidence that the authors have done so little to disarm such criticism in advance.

I have another worry about the book, which troubles me more. My concern is that it will be read on its own and not as a sequel to volume one. Nowhere in volume two are we told how policy should be designed if wage fixing is *not* reformed. But James Meade's ideas have been widely discussed already and there are some influential economists who want fiscal policy designed, even now, in accordance with the principle on which volume two is based, setting objectives for the increase in the nominal value of total output, irrespective of the split of that increase as between volume and price. A similar caution is needed in respect of the exchange rate. It is assumed in this study that the monetary authorities can control the exchange rate by intervening in the foreign exchange markets. We really need another volume to explain how that is to be done. In the meantime we must remember that the same fiscal and monetary policies are not appropriate when exchange rates are in fact floating. It would be interesting to see how the rules recommended here would have operated over the period 1972 to 1984 if wage fixing was not reformed and if the exchange rate was left free to find its own level. The results might not show much improvement over the policies actually pursued.

This not intended as a criticism of the book itself, which is an example of the best tradition of applied economics, as it continues to flourish in this country. It should be read widely, but read soberly.

Andrew Britton

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BOOKS

Science policies

Science in Government
by Jurlath Ronayne
Edward Arnold, £9.95
ISBN 0 7131 8040 4

As governments reflect on their countries' positions in the international league table of economic performance, one source to which they often turn for help in moving up the table is science. This in turn often stimulates interest in comparative studies of science policy structures and processes, with some hoping to learn lessons from abroad, and at least some others hoping to be reassured that nothing in their own arrangements need to be changed.

Professor Ronayne's book arose from such a study done for the Australian Science and Technology Council (ASTEC), which advises the prime minister on priorities and research activities generally and which asked Professor Ronayne to assist it to develop criteria and techniques for this purpose. This task required him, in the first instance, to review the literature on assessing priorities in scientific research and development, and on the criteria, techniques and institutional mechanisms used to enact science policy in selected countries. The material collected for these reviews forms the basis of this book, a book that is intended for students and staff on courses with a science policy studies component but which is likely also to be of interest to scientists and officials who are involved with the practice of science policy.

Students will find particularly helpful the surveys, in the first three chapters, of the historical development of the idea of science policy, the arguments for and against government intervention in science and technology, the available criteria for identifying priority areas, and the types of mechanisms for enacting science policy that can be distinguished. Among the subjects covered are the origins of the Department of Scientific and Industrial Research in Britain, the Bush report, in the United States, on *Science, The Endless Frontier*, and the seminal work of the OECD in encouraging governments to formulate science policies. Also useful are the reviews of the development of economic arguments about the role of government in the support of science and technology, and of various studies of technological innovation. There is, in addition, a brief discussion of some of the analytical techniques available in the field, although its very brevity might require interested students to move on quickly to the original sources.

The range of these surveys is admirably wide, although regrettably space has not been found for some of the more recent work on, for example, the shortcomings of the peer review system (there is an all-too-brief reference to this), or some of the sociological work which Australian, British, Dutch and German scholars, among others, have begun to apply with some effect to the question of whether the possibility of directing science to social goals varies with the nature and stage of development of each discipline: the implication of this work for science policy are considerable.

The bulk of the remainder of the book comprises studies of the science policy processes of the United States, Britain, Australia, West Germany, Canada, Japan and Belgium. The choice of countries was dictated by the initial ASTEC brief, but has been turned to advantage by Professor Ronayne to illustrate the operation of four types of science policy organization: the pluralist, the coordinated, the concerted action, and the centralist. Because the point is to illustrate the types, rather than to expound definitively on each of the selected national systems, the detail given in these chapters varies considerably: the one on Belgium, for example, gives no indication of the scale and distribution of funds for science; that on Australia is extremely rich, with many telling details; and that on the United States, while nearly as detailed, would perhaps have demonstrated even better the workings of a pluralist system if more account had been given of the role of Congress. Nevertheless, the typology outlined here offers an instructive approach to comparative science policy studies, and deserves more systematic development.

Philip Gummett

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Key to the cell

Molecular Biology of the Cell
by Bruce Alberts, Dennis Bray, Julian Lewis, Martin Raff, Keith Roberts and James D. Watson
Garland, £12.50
ISBN 0 8240 7283 9

"Long ago it became evident that the key to every biological problem must finally be sought in the cell, for every living organism is, or at some time has been, a cell", so said E. B. Wilson writing in 1925. The subject matter of this excellent undergraduate textbook is very much Wilson, 60 years on: "As the study of embryology, cytology and genetics goes forward, we see more and more clearly that it can only approach its final objectives through a close alliance with biophysics and biochemistry".

When the cell biology course in Cambridge began, almost 20 years ago, lecturers "knew of no one text that covered all the material in a satisfactory way". Wilson's classic *The Cell in Development and Heredity* was out of date, and J. D. Watson's excellent *The Molecular Biology of the Gene* largely ignored eukaryotic topics in favour of a treatment based on the genetics and metabolism of the bacteria. Since then some quite outstanding biochemistry textbooks have been published, and there are several very useful books that suit introductory courses in cell biology. This book, however, is altogether different; it is the book our teachers said didn't exist.

The authors write with authority: they are all actively working in relevant fields; and other experts were called in where necessary. (The list of secondary authors and readers is impressive.) The result is an accurate and up-to-date textbook. More unusually, it is also a pleasure to read and to look at. It gleams with intelligence, sound judgment and a graceful humour. Keith Roberts, who illustrated Watson's original book, has again provided the illustrations. The choice of photographs is superb, although a few of the drawings illustrate points that hardly need it. The references are well-chosen and sufficiently full to allow direct access to the primary literature as well as reviews, and the excellent index and cross-references within the text help tie remote sections together.

The authors rightly point out in their preface that to understand DNA is not to understand the essence of the living state, and the heart of the book presented in chapters five to thirteen makes this brilliantly clear. There is very little classical biochemistry as such, and relatively little about genes, but the wealth of fresh material about membranes, the cytoskeleton, cell division and cell physiology is all treated from the conceptual standpoint of molecular biology. The book is at its best in those areas where molecular explanations are available and appropriate, as for example in the chapter on membranes. It is less successful where they are not, as in the section on developmental biology, although I know of no other account of development that comes close to this chapter in terms of presenting current ideas clearly and succinctly. To my taste, the overall emphasis is exactly right, and traditional biochemistry courses had better take note.

The style of presentation, with its subheadings, summaries and uniform tone to some extent conceal places where we either don't know, or don't properly understand what is going on. Occasionally the authors admit this, but they prefer to emphasize what we actually know rather than say what we would *like* to know. The book is at its best when the experimental evidence forms part of the story, which it doesn't always do. In the section on cell-mediated immunity, they present the evidence and describe key experiments. By contrast, the section on the resting and action potentials of nerves is poor precisely because it gives too much theory with no idea of how we know; and includes too much trendy material (the poor old squid giant axon is mentioned only in a figure legend).

The deliberate omission of any detailed treatment of bacteria and their viruses (though amusingly, bacterial chemotaxis gets fully described), is a bold stroke and a great virtue. However, a companion volume which dealt with microorganisms and more fully with the subject of the first three chapters (essentially an updated edition of Watson's first book) would be most welcome. In the meantime, this book will inevitably serve as the standard text for undergraduate courses in biology.

Tim Hunt

Tim Hunt is lecturer in biochemistry at the University of Cambridge.

Common or white-tufted-ear marmoset from Brazil, painted by Sydney Parkinson in 1758. From *Sydney Parkinson: artist of Cook's "Endeavour" voyage*, edited by D. J. Carr and published by the British Museum (Natural History) in association with Croom Helm at £29.95.

Stellar images

The New Astronomy
by Nigel Henbest and Michael Marten
Cambridge University Press, £12.50
ISBN 0 521 25683 6

The publication in 1609 by Johannes Kepler of the first book entitled *The New Astronomy*, in which he presented his discovery of the first law of planetary motion, proved to be one of the key steps in the scientific revolution which culminated in Newton's discovery of the laws of motion and of gravity. Henbest and Marten's book celebrates what has proved to be a revolution in astronomy during the past 30 years.

Before 1945, astronomy meant the study of the heavens with optical telescopes using photographic plates. The new astronomy described and profusely illustrated in this splendid book concerns the expansion of the observable waveband from the mere half decade of the optical waveband to the 18 decades from long radio waves to the limit of hard gamma-rays. Equally significant are the use of electro-optical digital detectors for the optical waveband and the full power of modern data analysis and image processing techniques which contribute not only to the beauty of the illustrations in this book but also, and more important, to the ability of the astronomer to produce much more and better science from a given set of observations.

The essential feature of the book is that it reproduces astronomical images of celestial objects in the new wavebands, in many cases with the same angular resolving power which is routinely obtained with optical telescopes – a feat that would not have been possible a few years ago. In radio astronomy, imaging by the use of the aperture synthesis technique, first developed in Cambridge in the 1960s, was brought to a high pitch of perfection with the construction of the "very large array", a complex system of related sites centred on Arecibo (?) in the United States during the past six years. In X-ray astronomy, the Einstein Satellite Observatory, in orbit from 1978 to 1981, produced the first X-ray images of strong X-ray emitters with resolution comparable to typical optical pictures. Infrared telescopes can now map out celestial objects with the same angular resolution and with very high sensitivity. In contemplating the images of objects in these different wavebands, my own favourites, each of which could form a lecture course in its own right, are the planet Jupiter, the regions of star formation in the Orion Nebula, the supernovae Cassiopeia and the Crab Nebula, the all-sky images of our own Galaxy, one the nearest giant spiral neighbour M31 and the radio galaxies M87 and Cygnus A. The great technological achievements which they represent are described in separate chapters in the book.

To the professional, the book contains a spectacular collection of old friends, all assembled within a single convenient volume. It could certainly be used to great effect as part of his teaching course, particularly as many of the images are often surprisingly difficult to track down, especially in full colour. A wealth of data on many of the most important objects in the sky is also provided. As for the non-professional, I suspect he will have to work quite hard initially to appreciate the potential in each different wavebund and the angular resolution of each non-optical image. He might also find it difficult to relate the scales of the different images of the same object in different wavebands. Although this is always spelled out in the text, it is not always clear from the pictures or figure captions alone.

The accompanying text is reliable and strikes a nice balance between enthusiasm and sensible interpretation. General readers, however, will have to take on trust the various statements made about such processes as synchrotron radiation, thermal bremsstrahlung, and gamma-ray emission by pion decay. Apart from this, the text should be intelligible to all enthusiasts from teenagers upwards.

Although it might seem ungracious to find fault with such a beautiful and stimulating book, I do have one reservation. With such a mass of fascinating detail presented visually and in the text, general readers might lose sight of the overall grand design. Every different waveband tells a separate story which ultimately must be welded into a single picture. Although such a picture is now forming, it does require some appreciation of the nature of the many physical processes at work in the Universe to be wholly convincing. However, the book would certainly form an excellent basis for more technical studies of modern astronomy and astrophysics.

M. S. Longair

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Syntax checking

A First Course in Formal Language Theory
by V.J. Rayward-Smith
Blackwell Scientific, £7.80
ISBN 0 632 01176 9

Methods of communicating instructions to a computer have been under study for about 30 years, the main motivation for research being that computers can only execute relatively primitive instructions which are made up of groups of binary digits. As communicating instructions in this form is rare nowadays – it is extremely easy to make mistakes and it is usually not easy to express the solution to the problem in question in terms of the computer's instructions – the medium for communication is more likely to be one of the many "high-level" or "problem-orientated" languages, such as Pascal, Fortran or Ada. However, if the programs are to be executed efficiently, the high-level language version must be translated into a binary version so that the computer can execute the instructions. This process is known as compilation and the program which performs this task is known as a compiler.

The task, however, is not solely one of translation because the syntax and semantics of the high-level language are precisely defined and the instructions submitted in the high-level language must conform to the specification of that language. There are now several well-known methods of recognizing whether a given input has the required syntax, although methods for semantic checks are less well defined. Formal language theory, as defined in this book, covers the theoretical background of the algorithms which are usually used for syntax checking. As the compilation process is such an important part of program development, computing scientists should have an understanding of some of this theory.

The book commences with a brief review of the mathematical prerequisites and an introduction to grammars. As the basic symbols of a language can usually be described in terms of a "regular grammar", two chapters are then devoted to the development of algorithms for the recognition of such symbols. A description of the complete syntax of a language requires a less restrictive grammar, usually a context-free grammar, and the related theorems and proofs are described next.

The construction of algorithms to decide whether a given input is a syntactically legal program is more difficult. However, although push-down automata, top-down and bottom-up algorithms are covered, one of the most powerful bottom-up techniques, the LR parsing method, is not given full coverage. In particular, the simple LR condition is described but the LALR condition is not.

Rayward-Smith has written his book "primarily for first and second-year undergraduates, in a style which is thorough but also clear and undaunting". However, the joint objectives of rigour and clarity are extremely difficult to achieve with this topic, the one usually being sacrificed for the sake of the other. Although Rayward-Smith has worked hard to achieve a balance, he has not been totally successful, with rigour being the dominant factor.

David Robson

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BOOKS

AMERICAN STUDIES

Harsh roses

H.D.: Collected Poems 1912–1944
edited by Louis Martz
Carcanet, £16.95
ISBN 0 85635 457 0

The story goes that Pound, having made some characteristic corrections (or excisions) in the poem "Hermes of the Ways" wrote underneath it "H.D. Imagiste" and sent it off to Harriet Monroe at *Poetry*. This was in 1912 and one might say that thus the brief movement called Imagism began.

It would be pointless to repeat here the maxims or criteria which F. S. Flint drew up for true "imagist" poetry – with the dominant emphasis always on "direct treatment of the thing"; better perhaps to quote from Pound's comments which accompanied H.D.'s poem:

> It is in the laconic speech of the Imagistes. Objective – no slither – direct – no excess of adjectives etc. No metaphors that won't permit of examination. It's straight talk – straight as the Greek.

This is something which Pound wanted – and wanted for modern poetry – and he found it in some of the early poems of H.D. (with whom he was in love – according to W. C. Williams). Many of us have tended to regard H.D. as mainly an "Imagist" who happened to be in the right place at the right time when so many new things were starting to happen in modern poetry but who then more or less disappeared until her impressive *Trilogy* appeared – 1942–1944. But now that the indispensable Carcanet Press has published this first volume (over 600 pages!) of her collected poems we can see that she was a very much more considerable – and productive – figure. And the term "imagist" is quite inadequate to cover all her work – though it does indeed often rely heavily on sharp discrete perceptions and images – just as she is hardly a "Greek" poet though her poems teem with references to, and translations from, the Greeks. She had recourse to both Imagist techniques and classical (and mythical) figures and subjects to both project and control her own very intense feelings and their painful contradictory pressures.

As Louis Martz points out in his introduction, which is lucid and very perceptive as one would expect, many of the poems are strongly autobiographical, however impersonal they may seem to the uninformed reader. This of course poses some rather large questions. What difference would it make if – for example – we did not know that "The Master" was about Freud, with whom she underwent analysis, or that "The Poet" almost certainly refers to D. H. Lawrence with whom she had an intense – though not carnal – relation? This is not to mention the many poems about – for another example – the joys and griefs of her marriage to the unfaithful Richard Aldington, 'particularly the powerful poems "Amaranth", "Eros", "Envy". These are all moving and masterly poems in their own right but is there not some increase of meaning and impact when we know the occasion or initiating origin of their composition?

But leaving such large questions aside, what we do have is a very impressive series (relatively uninterrupted) of original, imaginative, moving, and technically adroit and often innovative poems, confronting and coping with what Martz calls "the seething junction of opposite forces". These forces may be intensely personal and inward; or they may comprehend forces running through myth, religion, history – world civilization itself.

> I have gone forward,
> I have gone backward

The scope and extent of her explorations, meditations, salvagings, her voyagings "forward and backward", are singular and distinctive even in this century of wide-ranging culturally peripatetic poets.

The very title of her first volume, *Sea Garden* (1916), suggesting as it does both potentially opposed and superimposed realms, sets the tone for many of the following poems. The "Sea Rose" is a "harsh rose": the "Sea Lily" is "slashed and torn / but doubly rich": benuty seems always to depend on and emerge from some kind of fierce clashing of forces from different areas of nuture or culture – or self. "Sheltered Garden" gives one of the clearest utterances to this vision. The sheltered garden is not a desirable place of harmony and security: on the contrary it is suffocating.

> For this beauty,
> beauty without strength,
> chokes out life.

She wants the wind to wreak its own kind of havoc there, leaving flowers broken and snapped, trees twisted and torn:

> O to blot out this garden
> to forget, to find a new beauty
> in some terrible
> wind-tortured place.

She is not one of those poets who "wander about" but "find no honey of flowers in this waste": but

> is our task less sweet –
> who recall the old splendour,
> await the new beauty of cities?

Recalling old splendour ("let us search the old highways . . . recover old values") and awaiting a new beauty ("the unwritten volume of the new") occupied much of her work. When she writes "I mend a break in time" she is referring to her self-appointed role of the scribe who can and must try to bridge the chasm between the vitalizing powers of past cultures and religions and the possibilites of a new life, a new set of saving values, regenerating new "spiritual realism" – a chasm caused by the ruinous destructive upheavals and disruptions of the historical period she lived through.

So while her poetry can seek ever further back in time for some primeval origin prior to all the different cultures and religions she is at the same time constantly trying to push through into some unmapped unrecorded future:

> we are voyagers, discoverers
> of the not-known,

and whatever the strains, the lapses the unconvincing repetitions and reiterations (and they are all detectable at time) there was, invariably, "persistence".

In all this she is clearly of the same era – and in some ways of a similar spirit – as Pound and Lawrence (two important men in her life), Yeats and Eliot; Freud and Jung and other psychologists and anthropologists. She also has affinities with some more recent poets – for instance Robert Duncan. Yet she is unmistakably H.D. whether in her more obviously Imagist and "Greek" phases, or in her more prophetic and mythico-religious writing. She may speak as for Hermes Trismegistus or from the book of Revelation, or she may be a seemingly detached scrutinizer of some of her own inner tensions, not least between passion and poetry:

> so my mind hesitates
> above the passion
> quivering yet to break,
> so my mind hesitates
> above my mind,
> listening to song's delight.

The image is of the wave-crest – recurrent in her work and one of her favourites, as Martz notes.

But for the most part there is discernible the scrupulously chosen vocabulary, intense yet usually curiously chaste, fervent yet classically controlled, marked by images carefully and cleanly sculpted (not for nothing does she compare her pencil to a chisel) and perceptions compactly and lucidly defined ("no slither"). If any of her poems are "roses" they are likely to be "harsh roses". There is everywhere a sense of economy. There is little if any cumulative flow in her poems: she seems to prefer to sort out, to break down her perceptions, ideas, feelings, into single-line units, often very short. It is a poetry which refuses to be – is perhaps apprehensive of being – overwhelmed, and thus never seeks to be overwhelming. As a poetess H.D. is like the shell-fish which – she wrote –

> senses the finite,
> it limits its orbit
> of being, its house
> temple, fane, shrine:
> it unlocks the portals
> at stated intervals;
> prompted by hunger,
> it opens to the tide-flow:
> but infinity? no,
> of nothing-too-much:
> I sense my own limit,
> my shell-jaws snap shut
> at invasion of the limitless,
> ocean-weight . . .

The sea (of passion, history, religions, and so on) was indeed all about her and the shell from within which she wrote registered many of their tidal tugs and flows (and a good many storms, and wrecks). Indeed she would periodically open herself to them. But continually, regularly – the "jaws snap shut". Each line bites off just what it can decently and carefully deal with. H.D. sensed her own limits. But she had that gift of persistence. And whatever she was writing about (of which a short review can give but inadequate intimation) she kept her faith. Ultimately a faith in langauge itself – for she knew that the Word is both prior to and – in the long run – stronger than the Sword.

> Thoth, Hermes, the stylus,
> the palette, the pen, the quill
> endure . . .

Tony Tanner

Tony Tanner is a fellow of King's College, Cambridge.

Arguments about federalism

The Growth of Federal Power in American History
edited by Rhodri Jeffreys-Jones and Bruce Collins
Scottish Academic Press, £16.00
ISBN 0 7073 0326 5

The present conservative government in the United States – unlike its counterpart in Britain – has endeavoured to shift power from the centre to local authorities. President Reagan's "New Federalism" reflects a widespread feeling that recent decades have seen a growth in federal power that contradicts hallowed American traditions of minimal government and local self-determination. This volume of essays, largely by British scholars, offers many interesting perspectives on such historical claims by Milton Friedman and the like.

The basic commitment to some form of national government pre-existed the writing of the Constitution in 1787 and, as Jack Pole emphasizes, derived from long-term forces as well as immediate necessities. The federal government remained a focus of national political life throughout the antebellum period, as Bruce Collins argues, even though in that relatively simple society real power was exercised by state governments. Only wars regularly enhanced central authority, and then only temporarily.

It was the development of a more interdependent, technologically advanced society, possessing problems beyond the scope of state governments, that made possible more permanent accretions of power. As the transportation and industrial revolutions created a national economy, so the federal government began to exercise new regulatory functions towards the end of the nineteenth century. However, to judge from this volume, it was the collapse of the states' welfare systems during the Great Depression that provoked the major shift in power; and it is the federal welfare state, founded during the New Deal and expanding since the 1960s – rather than the even more dramatic expansion of the federal military establishment since 1950 – that has drawn the main fire of conservatives.

Yet, to these British eyes, centralization has been extraordinarily restricted. Robert Harrison reveals impressively how the federal response to economic change in the late nineteenth century was limited both by the lack of a federal administrative system reaching into the states and by the persisting localism of party politicians – which meant many regulatory functions had to be exercised by the federal courts. Above all, Tony Badger's most rewarding essay spells out how the innovations of the New Deal were constantly cramped by the need to cooperate with conservative state governments and local interest groups. To use the dichotomy presented by the distinguished American contributor Harold Hyman, modern American federalism seems not so much a two-layered, adversarial system in which central power has overwhelmed state authority, as a mutually reinforcing cooperative venture between state and federal governments.

In any case, as Steve Spackman argues for the Reconstruction period, outright national power would be acceptable only if the United States were less heterogeneous or less committed to liberal political values. Those who dislike current federal policies have always resorted to traditional constitutional arguments, whenever they have suited their purposes. Duncan MacLeod shows how the revival of Old Republicanism in the "triple crisis" of 1819–21 linked strict constructionism to fears of Northern antislavery and the threat of industrial capitalism; David Turley demonstrates how the abolitionists' view of federal power changed according to whether it promised to achieve their purposes; and John Thompson reveals that Progressive publicists, for all their high expectations of government, could by 1920 become suspicious of governmental action they had never been able to control. Even now conservatives are selective in their criticism of federal-government power, concentrating their wrath on the domestic innovations of the 1960s and accepting instruments of an active foreign policy as liberal in origin and impact as the Peace Corps.

Unfortunately the volume as a whole does not consistently concentrate on these central themes. Some essays are focused primarily on current historiographical interpretations of particular periods, others on specific episodes or the attitudes of individuals and small groups; too many consider federal power only incidentally. This lack of focus arises from the volume's origin as a *Festschrift* for William Brock, and its provenance remains obvious despite Rhodri Jeffreys-Jones's valiant attempt to draw coherent conclusions from very disparate essays. Yet, for all its unevenesses, the general scholarly quality and interest of the essays are commendable, and the volume stands as a worthy tribute to the man whose study of the federal government in *An American Crisis* (1963) was the first original British contribution to American historiography.

Donald Ratcliffe

Donald Ratcliffe is senior lecturer in history at the University of Durham.

The Marcus Garvey and Universal Negro Improvement Association Papers
Volume I 1826–1919
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Edited by ROBERT A. HILL

Marcus Garvey (1887–1940) has been called 'the father of black nationalism'. A Jamaican who came to the United States in 1916, he founded the Universal Negro Improvement Association which grew into an extraordinary mass movement of black social protest, with a membership of between four and six million. Ideologically influenced by Sinn Fein, Garvey urged blacks to take a pride in their roots and culture and to reject any assimilation into white America.

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BOOKS
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Battle hymns

The Fire of Liberty
compiled, edited and with an introduction by Esmond Wright
Hamish Hamilton, £9.95
ISBN 0 241 11110 2

The campaigns of the American War of Independence are possessed of contrasting, perhaps confusing, aspects: they took place in a vast extent of territory, but were fought by armies that rarely amounted to more than 10,000 men; formal politeness between commanders and the courage of doomed yet resolute victims such as Nathan Hale and John André must be set against merciless Indian fights and almost wholly American encounters at Cherry Valley and King's Mountain, where both the number of killings and the way in which they were carried out offer spectacles stripped of all pretence of honour and formality; the contest was between amateurs and professionals and was resolved by an acceptance of failure rather than by outright victory. Six years of conflict involving, on its way to resolution, the emergence of such unforeseen and unprecedented elements, provide a topic which, no matter how often reviewed, maintains its fascination and reveals striking examples.

Esmond Wright has not failed to transform familiar episodes into dramatic events. He has allowed the story to be unfolded by those who made it: extracts from the writings, both strictly contemporary and later reminiscences, of American and British participants, are linked by a narrative designed not to overshadow personal descriptions and memories. It can only be regretted that while locations are given for the well-chosen illustrations a like assistance is withheld in the case of the text. Readers familiar with the principal printed sources of the military history of the Revolution will experience no great difficulty in tracking down a fair number of the original works, but few will be able to lay claim to a faultless identification. The professional historian, as much as the general reader, will regret the lack of this information and the necessity to repair ignorance by making inquiries at the Institute of United States Studies.

The battles of the war are sufficiently removed from present concerns to permit their study to be undertaken undisturbed by the distorting influence of national attachments. Professor Wright, an historian whose conservative sympathies are matched with his acknowledged authority on an upheaval possessing radical implications, would seem well suited to offer a delicately balanced assessment, and his selection of accounts fully confirms this expectation. Yet impartiality does not preclude judgment and leaves the reader to answer the question: which side left the better case for its cause? In this respect it seems evident that the American narratives prevail.

The Boston Massacre 1770, a contemporary print.

As amateurs, literacy and powers of expression were not, for the Revolutionaries, linked to military rank and class: their accounts of the conflict possess a power and immediacy of description that offer no obvious clue to status. The British version is composed almost entirely by officers, and if Sergeant Lamb provides an exception, his contribution does not compare altogether favourably with those of the American rank and file. The Continental Army attracted recruits who had enlisted to pursue a cause: the British regiments were made up of those who pursued war as a profession. The journey from Bunker Hill to Yorktown was accomplished by the painful creation of an American army that, inexperience notwithstanding, could compel the abject surrender of an imperial force.

Whether the cost, as the Franklin letter which closes the book suggests, could be justified in terms of money, misery, and destruction, will never be resolved. Franklin was certain that it could not, and one suspects that Professor Wright is also of that opinion. But since war is the record left for the historian to illuminate, the details may here be examined, in their appearances of glory and of shame.

Peter Marshall

Peter Marshall is professor of American history at the University of Manchester.

Contending images

The Divided Mind: Ideology and Imagination in America, 1898–1917
by Peter Conn
Cambridge University Press, £22.50
ISBN 0 521 25392 6

Cultural historians have often been seduced by the idea of a decisive generation: a group of significant individuals thrust together chronologically whose aspirations and achievements summarize those of the culture as a whole. For American historians the last decade of the nineteenth century and first of the twentieth have had particular appeal.

This period, punctuated by an imperialist war apparently confirming the nation's omnipotence (the Spanish-American war of 1898) and closing on the eve of involvement for the first time as an independent force in European conflict, also apparently saw enduring aspects of modern American culture confirmed or created. These include the triumph of corporate capital, the utter failure of American socialism, racial and sexual discrimination, and a series of self-conscious attempts to distance American art, architecture, music and literature from European models.

Peter Conn, in the critical essays which comprise the bulk of this book, is thus moving across familiar ground with special debts to Sacvan Bercovitch, Lionel Trilling and Larzar Ziff. A rather indigestible introduction surveys the historiography without adding significantly to it. Conn's chief concerns here are to reveal the wilder discrepancies, for example between those interpretations claiming Progressivism succeeded or failed as a social movement, and to reaffirm some, by now standard, maxims.

Conn's "divided mind" or "pattern of contrariety" echoes Trilling on the "irreducible complexity of culture" and Bercovitch's famous formula for the American jeremiad, at once lamenting American failure and reaffirming American promise. His subjects are pulled together by their susceptibility to "contending facts and images of past and future". If there was a cultural revolution in these years, there has also to have been a counter-revolution, and so on. The contextual frame for these artistic difficulties is Robert Wiebe's "Search for Order", the triumph of professionalization, organization and coordination in American economic and institutional life. However, our attention is directed away from macroeconomics and abstractions of this order to the reading of texts and their role as "reproductions" of the culture.

The idea of a hegemonic culture, part created by and part creative of a wide variety of artistic statements is not novel, and independent of these individual readings may even seem banal. Nor is there any real security to Conn's "generation", although he is scrupulous about directing attention to his title. To take two of his major characters: Henry James was 67 in 1900 and died in 1916; Frank Lloyd Wright was 31 in 1900 and died in 1959. It is not, of course, part of his case that those individuals met, influenced, or cared significantly about each other. He quotes E. L. Doctorow (the author of *Ragtime*) approvingly, who, when quizzed about the fictional meeting (and more) of the actress Evelyn Nesbit and the anarchist Emma Goldman, replied "They have now". This is before concluding *The Divided Mind* within a telling analysis of the different mental worlds occupied by James and Goldman, who *could* have met on New York's Bowery in 1905.

Happily, if the premise and theory are somewhat laboured, the individual studies are fresh and imaginative. Conn has cast his net wide, and some chapters (notably those on James and Charles Ives) are strongly derivative from other recent work. But in the discovery and exposition of material outside the mainstream he has developed some new and rewarding angles. For me, the discussion of literary feminism is best, where the novels of Edith Wharton, Ellen Glasgow and Kate Chopin are supplemented by original insights into the polemic of Charlotte Perkins Gilman (*Women and Economics* 1898) and Emma Goldman's rambling autobiography (*Living My Life*, 1931). There is also a welcome focus on the fiction, as opposed to the sociology of W. E. B. du Bois, and a revealing new light on Frank Lloyd Wright's famous lecture on "Art and Craft of the Machine" (shown convincingly here to have been originally anything but the modernist manifesto Wright and his disciples later claimed it to be).

Given such a heterogeneous cast of characters it may appear churlish to suggest that there are omissions, but one style of thought does seem damagingly under-represented. Apart from brief references to Henry James's brother William and his Harvard colleague George Santayana, there is no sustained consideration of American public philosophy during the last period in which it retained the significance thrust upon it by Emerson and the transcendentalists. James, for example, struggled with precisely the dilemmas identified by Conn as salient for his other subjects with an earnest desire to provoke debate on such issues as America's moral claims as an imperialist power. Attention to professional thought might, moreover, have obviated the uncharacteristically uncritical way in which Conn makes of pragmatism an epithet.

Almost half a century ago George Dangerfield punctured the more complacent view of Edwardian culture with his *The Strange Death of Liberal England* (1936), moving to the foreground the tension and violence associated with the Irish question, labour and women's suffrage. Conn's survey is similarly sensitive to the turbulence and restlessness of a period of American history which begins with the Haymarket bombing, sees recorded lynchings rise to unprecedented levels, and anticipates the "red scare" of the First World War. Faced by such turmoil many thoughful Americans, like their British contemporaries, showed ambivalence about the values and prospects of their culture. Conn's thorough and scholarly parade of testimony confirms this general truth, without saying much that is unexpected about where or why the fault lines occurred.

David Watson

Dr Watson is dean of the modular courses at Oxford Polytechnic.

A sense of balance

American Politics and Society
by David McKay
Martin Robertson, £20.00 and £6.95
ISBN 0 85520 636 5 and 660 8

Written as an introduction for non-American readers to the complexities of government in the United States, this book has many merits.

After two brief introductory chapters, the nine that follow cover the familiar topics: constitution and courts; executive (presidency and bureaucracy) and legislative (in their constituencies and in Washington); voting behaviour, parties and interest groups. The conclusion examines three crucial areas of policy-making – urban, economic and foreign affairs – to evaluate the performance of the system.

McKay is careful to avoid narrow institutional formalism, relating each topic to the social forces at work. And he achieves some freshness by an unconventional arrangement of his material: the historic constitutional background is immediately followed by an excellent chapter on federalism (one of his specialities); the discussions of party decline, rightly seen as somewhat ambiguous, and of voter participation precede and lead into the analysis of Congress; the presidency appears only in chapter nine, with its bureaucratic apparatus following on and linked directly to the pressure-groups with which it interacts. An abundance of up-to-date information is well organized in clear tables; the contemporary literature on each topic is regularly referred to; current controversies are shrewdly discussed, including some – such as the debate over regulation – which are often neglected or misunderstood by foreign observers.

Indeed the author manages to make the most of his "outsider" status, constantly comparing the United States to other industrial democracies as American authors rarely do. While well aware of the criticisms levelled at their system by various domestic schools of thought, he is not swept away as so many writers are by the latest fashionable analysis: on most subjects (such as federalism, parties, Congress, pressure-groups) he shows a judicious sense of balance and perspective.

The book is not free from faults. Proof-reading was inadequate: thirty proper names are mis-spelt, from Adlai Stevenson and Tip O'Neill to O. Harrold Carswell (Nixon's Supreme Court nominee whose solitary claim to distinction was his peculiar Christian name). There are a few mis-statements of fact and doubtful judgments. Domestically, the conservatism of Southern Democrats is less remarkable nowadays than the extent to which they have rejoined the party's mainstream; in foreign policy, the president's recent change of tone has attracted so much attention precisely because of the moralizing rhetoric which characterized his earlier pronouncements. Generally, the slips are few and far between, but in the court chapter particularly they are much too frequent (as are the mis-spellings); major and minor errors abound about its recent cases. Nevertheless, the author's general assessment of the court's role is as sensible and balanced as ever.

However, the errors are basically blemishes on a useful and well-organized text which accomplishes successfully the difficult tasks the author set himself: to keep a reasonable balance between information and comment, detail, celebration and criticism, the work of American writers and the perspective of a foreign observer.

P. M. Williams

P. M. Williams is a fellow of Nuffield College, Oxford.

BOOKS
AMERICAN STUDIES

Literary reduction

The Marriage of Emily Dickinson: a study of the fascicles
by William H. Shurr
Kentucky University Press, $22.00
ISBN 0 8131 1499 3

Emily Dickinson holds a peculiar fascination for readers who regard lyric verse as a species of autobiography. Her life appears to have been reclusive and uneventful, yet her poetry is charged with such intense emotion that speculation is rampant as to who was fanning the flames. Critics have proferred a bewildering variety of candidates for the role of secret lover: those of a religious persuasion see different poems addressed to God and to Christ; radical feminists have put forward the names of Kate Scott Anthon and Susan Gilbert Dickinson as the objects of lesbian love; while many have opted for a heterosexual reading, the Reverend Charles Wadsworth being the most favoured of a list of nominees that includes Samuel Bowles and Judge Otis Lord.

Dickinson left 1,775 poems at her death, slightly fewer than half being stitched into pamphlets or fascicles. These fascicles were dismantled when editors first published her verse in the 1890s, and it was not until three years ago that R. W. Franklin reconstructed the ordering of their contents. The thesis of the present volume is that the fascicles were compiled by Dickinson to send to her lover, and that they therefore disclose a discontinuous narrative of a straightforwardly autobiographical kind.

Read in this light, Professor Shurr suggests, the newly reconstituted fascicle poems show Dickinson to have fallen in love with a clergyman who advised her during a period of spiritual crisis. Although married, the clergyman returned her affection. Divorce being impossible for a man in his position, he and Dickinson pledged spiritual union, marriage in heaven being their reward for separation on earth. Before parting, they consummated their love; Dickinson conceived, and the pregnancy was aborted. Her life thereafter was a protracted wait in the sometimes wavering hope of reunion after death. Professor Shurr concludes that Wadsworth was the only man of Dickinson's acquaintance whose life accords with this verse chronicle.

As biographical speculation, this thesis is perfectly plausible: though only the discovery of unambiguous evidence, a new cache of letters perhaps, can verify it. In literary terms, the professor's greatest achievement is to have established more fully than heretofore the remarkably high incidence of marriage, separation and reunion scenes in the fascicle poems. His treatment of the pregnancy and abortion motifs is less compelling. At one point, he sets historical evidence of the availability of abortions alongside Dickinson's metaphors of premature death and deduces that she had a pregnancy terminated. One might as easily juxtapose the homicide statistics of the day with Dickinson's use of the word "assassin" and claim to have demonstrated that she was a murderer. Much of the argument is blighted by this sort of reductionism.

Consider the issue of narration. The overwhelming bulk of the poems under discussion simply do not specify who is speaking to whom. Consequently, even those of them that are indisputably addressed to a single audient are wonderfully open to a multiplicity of interpretations as to the relationship involved: woman to man, woman to woman, man to woman, man to man, woman to deity, man to deity, and so on. For Shurr to insist that texts which studiously avoid disclosing even the genders of their narrators are unmediated authorial utterances is crude and diminishing.

John Osborne

Dr Osborne is lecturer in American studies at the University of Hull.

The warm south

The Pursuit of Happiness: family and values in Jefferson's Virginia
by Jan Lewis
Cambridge University Press, £20.00
ISBN 0 521 25306 3

After over twenty years' discussion of American slavery, historians of the antebellum South are now beginning to re-examine white society. In 1980, Daniel B. Smith explored planters' family life in a region of eighteenth-century Virginia and Maryland. Rhys Isaac had much to say of family values and attitudes in a Pulitzer Prize-winning account, *The Transformation of Virginia, 1740–1790* (1982). Catherine Clinton has studied plantation mistresses during the period 1780–1835 and James Oakes in 1982 published a general discussion about slaveowners. Where so many young historians rush to fill an obvious gap, Jan Lewis's analysis of family values among literate Virginians from the 1780s to about 1830 understandably recapitulates some already familiar themes, but it nevertheless offers a fresh and lively interpretation of its own.

After casting yet another glance at the mid eighteenth-century gentry's assumptions, Lewis documents (in a chapter on each topic) changing attitudes towards religion, death, worldly success and love. Her central contention, expanding upon Isaac's arguments, is that only after the Revolution did Southern whites identify themselves fully with their affective families, reject the "public" sphere as unsatisfying, harsh, even threatening, and express their emotions freely to their intimate friends and kin. Eighteenth-century gentry ideals – self-restraint, optimistic secularism, public rituals and activities, and republican virtue – yielded to privatized and passionate beliefs and conduct. Evangelical religion and commercial expansion wrought this transformation; the latter purchased greater ease, while also creating competitive conditions which those enjoying reasonable affluence often – Lewis would urge, typically – deplored.

The argument is wide-ranging and elusive. Clearly, a phenomenon calls for explanation; a large number of often emotionally frank letters and diaries survive from the early nineteenth century, in contrast with the numerically sparse and emotionally spartan letters and diaries of the mid eighteenth century. But the possibility that such a phenomenon was related to new conventions of letter-writing, the influence of Romantic literature, and the spread of active literacy is scarcely explored. Smith's planters adopted an affective, family-centric style earlier than Lewis's families, and without experiencing the evangelical revival beginning in 1799–1800; these differences in dating and influence are left unexplained by Lewis.

Nor does her book attempt to add to our nebulous knowledge of the emotional ice-age which apparently froze Virginians' feelings before the mid eighteenth century. One tires of meeting that atypically rich and sadistic snob, William Byrd II, as the exemplar of early eighteenth-century attitudes to love, death, and so forth. At the opposite end of the chronological spectrum, Allison Freehling's book on constitutional reform in 1831–32 leads us to ask whether Virginians underwent not a third transformation in sixty or so years; for, while family attachments and evangelical emotionalism certainly did not wane, participation in public life, political and economic, was, as Freehling shows, vigorous in 1831–32 and thereafter.

If one would have wished for a more restrained formulation of both general arguments and particular judgments – since the evidence *is* elusive and the subject difficult to define – one should also emphasize the book's strengths. Religion and the cult of sentiment are handled better than by Smith. Southern women's lives and roles are treated far more subtly than by Clinton. The writing has enviable and stimulating vitality. And both argument and subject matter have wide ramifications.

Bruce Collins

Dr Collins is lecturer in modern history at the University of Glasgow.

A sense of risk

Robert Lowell: an introduction to the poetry
by Mark Rudman
Columbia University Press, $26.50
ISBN 0 231 04672 3

This book is not really a critical introduction but an impressionistic, often innovative, and highly personal account of Lowell's poetry.

As a practising poet and translator, Mark Rudman is acutely, even painfully aware of the problems any writer must deal with, and he uses this awareness to achieve flashes of insight into the language and workings of particular poems. His is an essentially intuitive, unstructured approach; he may divide the chapters up chronologically, but each chapter consists of a series of speculative fragments, notes towards an understanding of a writer who (as Rudman points out more than once) was himself uncomfortable with rigidly sequential forms.

It is, too, an approach that is rooted in autobiography. The book begins, for instance, with a recollection of where Rudman was on the day Lowell died: on the beach at Madaket, with a copy of *The Big Sleep* in his pocket. This then shades into an ingenious discussion of Lowell's use of place, particularly the landscapes of his childhood (Madaket is, of course, the setting for "The Quaker Graveyard in Nantucket"), and of the relationship between the arts of detection and poetry. Briefly summarized in this way, this strategy of connecting Lowell's work to Rudman's life may sound forced. Rudman is enough of an artist, however, to make the connexions seem natural, and it gives his book something of that quality that he finds especially valuable in Lowell's writing – a unity of voice, the sense that the reader is in the presence of an individual person.

Not that Rudman's approach is without its flaws; since his tendency to rely on moments of revelation rather than a consecutive argument does mean that the reader is unlikely to be convinced by any particular point if he is not won over immediately. Little effort is made to substantiate things in a conventional fashion; one nugget of wisdom is unearthed, described (sometimes, it must be admitted, with irritatingly oracular brevity), and then hastily discarded in favour of another. More than once, too, the different snapshot impressions Rudman offers appear to conflict. He tells us, for instance, that Lowell's wordplay acts as a reminder that there is no natural congruence between words and things, and then shortly afterwards insists that if anything Lowell was too literal a writer, clinging "too tenaciously to surfaces." It may well be possible to reconcile these two views, of Lowell as nominalist or fabulator and Lowell as literalist. The point is, however, that Rudman does not attempt to do so. To be more accurate, the improvizational nature, the slapdash intensity of his approach does not provide him with the opportunity of teasing out the apparent contradictions and perhaps resolving them.

But even allowing for such weaknesses, this is an impressive study. Issues that another, more pedestrian critic might take an entire essay to consider – such as Lowell's habit of reinventing the past while remembering it, or his inclination to see politics as a part of daily life – are handled with a rare ease and facility, a quicksilver wit and delicacy of touch. There are intriguing comparisons, too, with other poets: Lowell's treatment of the sonnet form, for example, is usefully likened to that of Keats. And through it all there is a feeling of adventure, the sense of a mind willing to take chances, venture guesses, and (when necessary) confess ignorance.

In his opening chapter, Rudman quotes a line from one of Lowell's last poems – "Risk was his métier" – as a way of summing up what he sees as the poet's willingness to confront the world head on. That same line could well stand as the epigraph of this book: which, in a way that is sadly unusual in recent criticism, presents the act of reading as a kind of gamble, a hazardous and not always successful raid on the unknown.

Richard Gray

Dr Gray is reader in the department of literature at the University of Essex.

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This is the first comparative biography of Wilson and Roosevelt – political adversaries who, between them, shaped the politics of industrial America. John Milton Cooper examines their backgrounds and personalities, their diverging ideologies and leadership styles, their policies and their personal conflict (including their battle for the White House in 1912) to show why they remain the principal architects of modern American politics.
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Honorary degrees

BIRMINGHAM

DLitt: Professor Jacob Ajayi, professor of history at the University of Ibadan: **LLD:** Sir Douglas Black, until recently president of Royal College of Physicians: Dr Solomon Wand, general medical practitioner with distinguished service in British Medical Association. **DSc:** Professor Sir Hermann Bondi, chairman of the Natural Environment Research Council; Sir Walter Marshall, chairman of the Central Electricity Generating Board; Sir John Vane, group research and development director for the Wellcome Foundation and joint winner of the 1982 Nobel Prize for Medicine. **DSocSci:** Professor Sir Alan Walters, economic adviser to Prime Minister. **DD:** The Rt Rev. Hugh Montefiore, Lord Bishop of Birmingham. **DMus:** Simon Rattle, pictured, principal conductor and artistic adviser to City of Birmingham Symphony Orchestra.

NEWCASTLE UPON TYNE

DCL: Frank S. B. Chao, president, Wah Kwong and Company, Hongkong Ltd: Michael Brearley, OBE, England cricket captain, 1977–80 and 1981 lecturer in philosophy at University of Newcastle upon Tyne from 1968 to 1971. **DSc:** Sir Kenneth Blaxter, Kt, FRS, FRSE, director of Rowett Research Institute and consultant director of Commonwealth Bureau of Nutrition until 1982. **DEng:** Sir Duncan McDonald, Kt, CBE, chairman of Northern Engineering Industries plc since 1982. **DLitt:** Joyce Maire Reynolds, FBA, fellow and director of studies, Newnham College, Cambridge, since 1951. **MA:** Thomas Allen, ARCM, principal baritone, Royal Opera Covent Garden 1972 to 1978.

EXETER

DSc: Professor Rutherford Aris, professor of chemical engineering at the University of Minnesota: Mr Knud Ellitsgaard-Rasmussen, former director of the Geological Survey of Greenland: Professor Sir Alan Harris, CBE, former professor of civil engineering at Imperial College. **LLD:** Miss Sheila Browne, CB, principal of Newnham College, Cambridge, and formerly senior chief inspector at DES: The Hon. Sir Hugh Park, Judge of the High Court of Justice in the Queen's Bench Division. **DLitt:** Mr William Trevor, CBE, Irish novelist. **MA:** Mrs Gene Kemp, writer for children.

Chairs

Professor John N. Buxton, currently professor of computer science at the University of Warwick, has been appointed to the chair of information technology at King's College, London. A former pro vice chancellor of the University of Bristol, Philip Pettit, has become professor of equity at the University of Buckingham.

Dr A. P. Mirodowinik, reader and acting head of the department of metallurgy and materials technology at the University of Surrey has been appointed professor of metallurgy.

Four professorial appointments have been made at the University of Salford: Dr David Armour has been appointed to a chair in electronic and electrical engineering; Michael Goldsmith to a chair in the department of politics and contemporary history; Dr William Grant to a personal chair in the department of electronic and electrical engineering; and Dr Noel Thomas to a chair in the department of modern languages.

Professor Gareth Williams, at present professor of educational planning and director of the Institute for Research and Development in Post-Compulsory Education in the University of Lancaster, has been appointed to the chair of educational administration at the University of London Institute of Education.

Dr Mervyn Lewis, currently reader in economics at the University of Adelaide, South Australia, is to be Midland Bank Professor of Money and Banking at the University of Nottingham.

Professor John N. Buxton, currently professor of computer science at the University of Warwick, has been appointed to the chair of information technology at King's College, London. A former pro vice chancellor of the University of Bristol, Philip Pettit, has become professor of equity at the University of Buckingham.

Dr A. P. Mirodowinik, reader and acting head of the department of metallurgy and materials technology at the University of Surrey has been appointed professor of metallurgy.

Grants

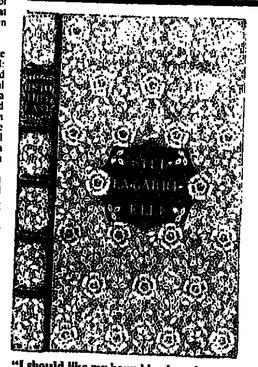
BATH

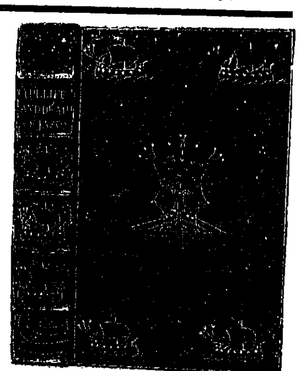
Dr P. L. Yue, £19,500 from SERC (absorption of light energy in fluidised reactor); Dr R. J. Holbeche, £31,210 from Home Office (data transmission trials with AM radio bearer); Dr A. Whitfield and Dr. M. Tarabad, £51,065 from SERC (suppression of turbocharget compressor surge by application of variable geometry diffusers); Dr R. E. Klein, £45,000 from King Edward's Hospital Fund for London (policy implications of information technology for NHS); Professor C. T. Sandford, £33,605 from ESRC (compliance costs of personal and business income tax payers); Mr G. E. Cox and Mr P. D. Lowe, £20,160 from ESRC (land use conflict afer Wildlife and Countryside Act: role of farming and wildlife advisory group); Mr M. O'Higgins, £10,850 from Anglo-German Foundation (distributive effects of social security and health insurance); Dr R. A. Buchanan, £9,901 from Royal Commission on Historical Monuments (Index of archaeological excavations for South West); Professor G. O. Henshaw, £9,913 from Overseas Development Administration (tissue culture techniques and genetic conservation of the potato); Mr V. Petrovic, £11,091 from SERC (Cartesian feedback); Dr K. Bolton, £19,774 from MoD (management of quality assurance in the UK electronics industry).

BRADFORD

Professor M. F. Edwards and Dr R. Smith, £36,600 from SERC (cooling techniques in fabrication of plastic components); Professor M. F. Edwards, Dr P. D. Coates and Dr A. F. Johnson, £54,784 from SERC (teaching company programme with Nelton Ltd, with a £5,000 complementary award from Nelton); Dr D. Wood and Dr P. D. Coates, £5,610 from SERC (rubber extrusion); Dr P. D. Coates and Dr A. F. Johnson, £4,430 from SERC (reinforced reaction injection moulding); Professor I. Goodman and Dr A. F. Johnson, £19,800 from SERC (block size distribution in linear segmented copolyurethane elastometers); Mr F. J. Hewitt, use of facilities at AWRE, Aldermaston (neutron activation); Dr K. Manchester, £23,805 from SERC (palaeopathological evidence of leprosy and tuberculosis in Britain); Dr R. Hunter and Mr S. E. Warren, £18,767 from SERC (inductively coupled plasma emission spectroscopy of archaeological glasses); Dr P. S. Excell, £25,348 from SERC (radio-frequency electromagnetic susceptibility); Professor P. A. Watson, £16,523 from SERC (definition phase study for land mobile payload on CERS); Dr R. J. Naylor and Dr B. Costall, £18,963 from MRC (hypothalamus as site of benzamide action to facilitate gastric emptying); Dr J. Rodgers, £23,375 from MRC (mechanisms underlying behaviourally induced antinociception): Professor B. W. Barry, £15,000 from Pharmacia AB Sweden (hydration state of human skin and its optimization to treat dermatological disease and promote drug absorption); Dr D. Geldart, £4,548 from British Gas Corporation (operation of L' valves), Professor M. F. Edwards, £16,580 from Nelton Ltd (oriented polymeric grids); Professor C. Hanson, £38,695 from United Kingdom Atomic Energy Authority (rotating disc column scale up studies); Professor M. F. Edwards, £18,000 from Rowntree Mackintosh, York (effect of particle size on rheology of chocolate); Professor G. Shaw, £6,746 (initially from Yorkshire Cancer Research Campaign (carbohydrates as chiral centre sources in synthesis of anthracyclinones and anthracyclines with anti-tumour activity and eliminished toxicity; Professor P. Doyle, £15,180 from SSRC/ESRC (Japanese marketing strategies in UK and Europe); Alternative Defence Commission/ School of Peace Studies, £10,000 from Cadbury Research Trust (non-nuclear defence policies); Dr M. Dando £15,000 from Charities Aid Foundation (perceptions of international security).

NOTICE BOARD





"I should like my bound books, wherever they go, to carry a message of fitness and orderly beauty – My books are my poems, and they, I hope, will speak for me when I am far hence, and I know not where". Thomas Cobden-Sanderson was one of the most characteristic – though still little-known – members of the Arts and Crafts movement. Up until his death in 1922, his books and bindings were greatly admired for their simplicity and beauty; his reputation is now being revived, thanks to the efforts of staff at the British Museum who have mounted an exhibition of Cobden-Sanderson books which will be on show until April 29. Pictured are Ruskin's *Unto This Last*, inscribed to Cobden-Sanderson's daughter Stella Gabrielle, and William Morris's *Life and Death of Jason* a New Year's gift for his wife.

Promotions

HULL UNIVERSITY

Personal professorships: Dr Colin Ratledge (biochemistry); Dr Phillip Taylor (American studies).

LONDON UNIVERSITY

Personal professorships: John E. B. Williams (criminology with special reference to penology – LSE); Dr Kenneth R. Harrap (biochemical pharmacology – Institute of Cancer Research); Dr Victor C. Roberts (biomedical engineering - King's College); Dr M. T. Temple (geology – Birkbeck); Dr Marianne Wynn (German – Westfield).

Readerships: Dr Hugh Ross Anderson (clinical epidemiology and social medicine - St George's Hospital Medical School); Dr Alan M. A. Ebrington (immunology - Queen Elizabeth College); Dr Robert F. Foster (modern history – Birkbeck); Dr David B. Falkner (psychology of individual differences – Institute of Psychiatry); Dr John I. Greenwalt (geology – University College); Dr Nigel Harris (development planning – University College); Dr Joan P. D. Y. Morgan (cell studies – Royal Free Hospital School); David F. J. Pluchaud (social administration – LSE); Dr Michael D. Stern (English – Birkbeck); Dr John F. C. Webster (farm business management – Wye College); Dr Jenifer Wilson-Barnett (nursing studies – Chelsea College).

SURREY UNIVERSITY

Personal professorships: Dr L. J. King (biochemistry); Dr. D. V. Canter (applied psychology).

PORTSMOUTH POLYTECHNIC

Professorships: G. M. Martin (Hispanic and Latin American studies); O. S. Pugh (biological sciences, head of department – formerly at University of Aston).

GLASGOW COLLEGE OF TECHNOLOGY

Senior lecturerships: John Cousin (management studies); Martin Speller (mathematics); Douglas Murray (computing studies); James Schofield (computer services unit). **Assistant director:** Dr Peter Bush.

Appointments

BATH UNIVERSITY

Lecturerships: G. M. P. Swann (school of management Centre for European Industrial Studies).

GLASGOW COLLEGE OF TECHNOLOGY

Lecturerships: Patrick Devlin (finance and accounting); Denis Fitzsimons (finance and accounting); Stuart McNiery (finance and accounting); Dr Angus McLachlan (psychology); Moira McMillan (law and public administration).

Mr. J. A. Grammer has been appointed principal of King Alfred's College, Winchester, in succession to Mr Martial Rose, who retires this year. Mr Grammer is at present head of educational studies at Christ College, Canterbury. He is former principal of Sittingbourne College of Education.

Open University viewing

Saturday February 25

BBC1

6.20 Genetics. Past, Present and Future (S299; prog 1).
6.45 Failure of Stressed Materials. Last of the Liberties (T353; prog 1).
7.35 The Handicapped person in the Community. Am I being unrealistic? (P251; prog 1).
8.00 An Aging Population, Lifetimes (P252; prog 1).

BBC2

9.20 Ecology. Saltwater and the Bleeham Tubes (S323; prog 2).
9.50 Materials Processing. Brick by Brick (T352; prog 1).
10.15 Numerical Computation. Finding Roots of Equations (M351; prog 1).
7.40 Art in Italy. Santa Maria del Popolo: a Renaissance Church (A352; prog 1).
8.05 Education for Adults. The University of the Third Age (E355; prog 5).
8.30* Arts Foundation Course. Uses and Abuses of argument on television: 1 (A101; prog 2).
8.55 Introductory Electronics. Electronic Design and Signal Distortion (T282; prog 1).
9.20 Ethnic Minorities and Community Relations. Bridging the Gap. Part Two: Bunon: 2. Home from Home (E354; prog 6).
9.45 Popular Culture. Television and Christmas: Constructing the Past (U201; prog 2).
10.10 Engineering Mechanics. Thermofluids & Energy. The Hydraulic Ram (T233; prog 1).
10.35 Personality and Learning. It's a Matter of Opinion (E291; prog 1).
11.00 Statistics. Kepler's War (U202; prog 12).
11.25 Basic Science for Technology. Motion and Newton's Laws (T281; prog 1).
11.50 The Effective Manager (P670; prog 2).
12.15 Special Needs in Education. A Dependent Future, part 1: Just one of those things (E241; prog 1).
12.40 Contemporary Issues in Education. They'll not stand with Neither (E300; prog 2).
13.05 Introduction to Pure Maths. Conics (M203; prog 3).
13.30 History of Mathematics. Number Now and Then (AM289; prog 1).
13.55 Fundamentals of Human Geography. Land Use Change in Southern Ontario (D204; prog 2).
14.20 Elements of Music. Score Reading (A241; prog 1).
14.45* Modern Art and Modernism. Artists' Techniques: Anthea Callen (A315; prog 3).

RADIO 3 (VHF)

6.55* Science Foundation Course Look before you leap (S181; prog 2).
7.15* Maths Foundation Course. Foundation Maths 1 (M101; prog 1).
7.35 Social Sciences Foundation Course. Magazine Programme 1 (D102; prog 2).
23.20* A15 Foundation Course. Why we should travel well (A101; prog 2).
23.40 The 19th Century Novel 1814 (A312; prog 2).

Sunday February 26

BBC1

6.20* Geology. James Hutton: Geologist (S236; prog 1).
6.45 Industrial Relations. The Interested Parties (T281; prog 11).
7.10 Art and Environment. Resources in Sound (TAD292; prog 2).
7.35 Applied Economics and Taxation. Dependents Plans: A game with figures? Part 1 (D323) prog 1).
8.00 Telecommunication Systems. Modulation (T331; prog 3).
8.25 The Nature of Chemistry. The Development of Chemistry: Alchemy (S237; prog 1).
8.50 Consumer Choice. Mixing it Better (T971; prog 1).
9.15 Contemporary Issues in Education. They'll not stand with Neither (E300; prog 2).
9.40 Fundamentals of Human Geography. Land use Change in Southern Ontario (D204; prog 2).
10.05 Elements of Music. Score Reading (A241; prog 1).
10.30 Maths Foundation Course. The Binomial Theorem (M101; prog 2).
10.55 Ecology. Saltwater and the Bleeham Tubes (S323; prog 2).
11.20 Materials Processing. Brick by Brick (T352; prog 1).
11.45 Chemistry. The Development of Chemistry: Alchemy (S237; prog 1).
12.10* Numerical Computation. Finding Roots of Equations (M351; prog 1).
12.35 Art in Italy. Santa Maria del Popolo: a Renaissance Church (A352; prog 1).
1.00 Education for Adults. The University of the Third Age (E355; prog 5).
1.25* Arts Foundation Course. Uses and Abuses of argument on television: 1 (A101; prog 2).
1.50 Introductory Electronics. Electronic Design and Signal Distortion (T282; prog 1).
2.15 Ethnic Minorities and Community Relations. Bridging the Gap. Part Two: Bunon: 2. Home from Home (E354; prog 6).
2.40 Popular Culture. Television and Christmas: Constructing the Past (U201; prog 2).
3.05 Engineering Mechanics. Thermofluids & Energy. The Hydraulic Ram (T233; prog 1).
3.30 Personality and Learning. It's a Matter of Opinion (E291; prog 1).
3.55 Statistics. Kepler's War (U202; prog 12).
4.20 Basic Science for Technology. Motion and Newton's Laws (T281; prog 1).
4.45 The Effective Manager (P670; prog 2).
5.10 Special Needs in Education. A Dependent Future, part 1: Just one of those things (E241; prog 1).

BBC2

6.20 Pluviofiles of Chemical Processes. Solubility (T324; prog 2).
6.50 Science Foundation course. Motion – Newton's Laws (S101; prog 3).
7.15 Social Sciences Foundation course. Questioning Assumptions (D102; prog 4).
7.40 Maths Foundation Course. The Binomial Theorem (M101; prog 2).
8.05 Social Sciences Foundation course. Questioning Assumptions (D102; prog 4).
8.30* Science Foundation course. Motion – Newton's Laws (S101; prog 3).
8.55 Social Sciences Foundation course. Questioning Assumptions (D102; prog 4).
9.20 Maths Foundation Course. The Binomial Theorem (M101; prog 2).
9.45 State and Society. Utopia: Society without the State (D209; prog 2).
10.10 17th Century England. Architecture and Society 2: "Proud Ambitious Heaps" (A203; prog 2).
11.00 The Rise of Modernism in Music. "Are my ears on wrong"?: A Profile of Charles Ives (A308; prog 3).
11.25 An Introduction to Sociology. Eileen Barker opens the Mysteries (D207; prog 1).
11.50 Biology. Form and Function. Life on Seashores (S202; prog 3).
12.15 The Earth's Physical Resources. Resources and Reserves: Some Basic Concepts (S238; prog 1).
12.40* The 19th Century Novel and its Legacy. Mansfield Park – Improvement (A312; prog 2).
13.05 Modelling by Mathematics. Piecing together a model (M281; prog 1).
13.30 Maths Models and Methods. Newton's Laws (MST204; prog 4).

RADIO 3 (VHF)

6.55 Modern Art and Modernism. Baudelaire and Imagination: Nigel Blake (A315; prog 3).
7.15 Personality and Learning. Three Perspectives on Personality (E291; prog 3).
7.35* The First Year of Life. As the Twig is Bent (T232; prog 4).

RADIO 4 (VHF)

6.45 Introduction to Calculus. Getting Started (MST283; prog 1).
7.05 Shakespeare. Shakespeare's History Plays (A361; prog 1).

Monday February 27

BBC2

6.05* Elements of Music. Score Reading (A241; prog 1).
6.30* Maths Foundation Course. The Binomial Theorem (M101; prog 2).
7.45* Ecology. Saltwater and the Bleeham Tubes (S323; prog 2).
7.45* Materials Processing. Brick by Brick (T352; prog 1).
17.10* Contemporary Issues in Education. They'll not stand with Neither (E300; prog 2).
23.30 Romantic Poetry. Blake the Artist (A362; prog 2).
23.55* Fundamentals of Human Geography. Land use Change in Southern Ontario (D204; prog 2).

RADIO 3 (VHF)

6.15 Social Psychology. The Biological and the Social (D305; prog 2).
6.35 Arts Foundation Course. Radio History: An Exercise in Constructive Criticism (A101; prog 3).
23.20 Man's Religious Quest. The Sociologist and Religion (AD208; prog 12).
23.40* Introduction to Calculus. Getting Started (MS283; prog 1).

Tuesday February 28

BBC2

6.05 Modern Art and Modernism. Manet: T. J. Clark (A315; prog 2).
6.30* A15 Italy. Santa Maria del Popolo: a Renaissance Church (A352; prog 1).
6.55* Biology: Form and Function. Life on Seashores (S202; prog 3).
7.20 Science Foundation course. Into the Earth (S101; prog 4).
7.45* Materials. Past, Present and Future (S299; prog 1).
17.10* Management Issue in Post Compulsory Education. Coventry: What can I do? (E324; prog 2).
23.30* Personality and Learning. It's a matter of Opinion (E291; prog 1).
23.55 Systems Organisation. Boundaries and Biases (T243; prog 2).

RADIO 3 (VHF)

6.15* The 19th Century Novel 1814 (A312; prog 2).
23.30 The Enlightenment. Pope's "Essay on Man" (A363; prog 3).

RADIO 4 (VHF)

23.30 Open Forum – 3. Student Information Programme

Thursday March 1

BBC1

12.05 Maths Special. The Cockcroft Report
6.05* Introduction to Pure Maths. Conics (M203; prog 3).
6.30* History of Mathematics. Number Now and Then (AM289; prog 1).
6.55* The Earth's Physical Resources Resources and Reserves. Some Basic Concepts (S238; prog 1).
7.20* Social Sciences Foundation Course. Questioning Assumptions (D102; prog 3).
7.45* Failure of Stressed Materials. Last of the Liberties (T353; prog 1).
17.10* The Handicapped Person in the Community Am I being unrealistic? (P251; prog 1).
23.30* Basic Science for Technology. Motion and Newton's Laws (T281; prog 1).
23.55* Social Psychology. Psychosexual Differences. 2 (D305; prog 2).

RADIO 3 (VHF)

6.25 Industrial Relations. The Interested Parties (T281; prog 11).
6.55 Modern Art and Modernism. Baudelaire and Imagination: Nigel Blake (A315; prog 3).
22.40* Personality and Learning. Three Perspectives on Personality (E291; prog 3).

RADIO 4 (VHF)

23.20 Art and Environment. Resources in Sound (TAD292; prog 2).
23.40* Shakespeare. Shakespeare's History Plays (A361; prog 1).

Friday March 2

BBC2

6.05* Maths Models and Methods. Newton's Laws (MST204; prog 4).
6.30* An Introduction to Sociology. Eileen Barker (D207; prog 1).
6.55* Systems Behaviour. A question of Interpretation (T241; prog 1).
7.20* Understanding Space and Time. As surely as Columbus saw America (S354; prog 3).
7.45* Physics & Chemical Processes. Solubility (T324; prog 2).
17.05 World Outlook – 4.
17.10* State and Society: Utopia: Society without State (D209; prog 2).

RADIO 3 (VHF)

6.15* Man's Religious Quest. The Sociologist and Religion (AD208; prog 12).
6.35* The Enlightenment. Pope's "Essay on Man" (A363; prog 3).
23.20* Health Choices. Mixing it Better (T971; prog 1).
23.40 17th Century England. Popular Art in the 17th Century (A303; prog 2).
23.40* Personal Portfolios

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Universities

AUSTRALIA

Applications are invited for the following posts for which applications close on the dates shown. SALARIES (unless otherwise stated) are as follows: Postdoctoral Fellow A$20,164–A$23,100 (Grade 1). Research Fellow A$25,804–A$30,734; Senior Research Fellow A$32,870–A$38,980; Senior Lecturer A$31,396–A$34,555; Lecturer A$23,394–A$30,734. Further details and application procedure may be obtained from the Association of Commonwealth Universities (Assets), 36 Gordon Square, London WC1H 0PF unless applications are invited direct to the University.

The University of New South Wales, Sydney

LECTURER – SCHOOL OF MATHEMATICS (APPLIED MATHEMATICS)

Applicants should have a Ph.D. or equivalent qualifications, and research interests in some area of applied mathematics related to current interests in the school viz: computational mathematics, analysis of algorithms, optimization, control theory, theoretical oceanography or fluid dynamics.

The successful applicant will teach and supervise graduate students in his/her own areas of research and participate in the teaching of other applied mathematics subjects, as well as other courses offered by the school.

The position will be available from July 1984 and appointment will be for a fixed term of three years.

Further information from Professor G Brown, Head, School of Mathematics, c/-P.O. Box 1, Kensington, NSW, Australia 2033.

Equality of employment opportunity is University policy.
9th April 1984.

The University of Sydney

LECTURER – SCHOOL OF CIVIL AND MINING ENGINEERING

Applicants should be qualified in engineering or related discipline, and will be expected to conduct courses in surveying and instrumentation. Special interests in computer graphics, computer-aided design or the application of computers to mapping, would be an advantage, but applicants with other interests will also be considered
31st March 1984

SENIOR LECTURER/ LECTURER – DEPARTMENT OF ECONOMICS

Applications are invited for appointment to a Senior Lecturership or Lecturership in Department of Economics. Preference may be given to persons with interests in theoretical and applied fields related to microeconomics. For appointment to a Senior Lectureship the successful candidate should have substantial lecturing experience and a proven research capacity.
23rd March 1984.

LECTURER – SCHOOL OF CIVIL AND MINING ENGINEERING

Applications are invited from qualified persons who have a special interest in the design and construction of concrete structures.
30th April 1984.

Appointments to lectureships are usually probationary for three years and the University reserves the right not to proceed with any appointment for financial or other reasons.

Equal employment opportunity is University policy.

The University of Western Australia, Perth

LECTURER/SENIOR LECTURER IN MECHANICAL ENGINEERING

Applications are invited for appointment as a Lecturer/Senior Lecturer in the Department of Mechanical Engineering. The vacancy has arisen following the retirement of Professor D. J. Allen-Williams. It is expected that the successful applicant will have an appropriate higher degree and will have had subsequent experience in teaching or research and industry. The Department is looking to strengthen its areas of Applied Thermodynamics and CAD. Applicants with experience in these areas will be given preference.

The successful applicant will be expected to contribute towards the research activities of the Department which presently include studies in the following areas: fluid mechanics: applied mechanics, including dynamics and control, manufacturing technology; and solar energy.

Detailed information on the teaching and research activities of the Department may be obtained from the Staffing Officer. Conditions of appointment will be specified in any offer of appointment which may be made as a result of this advertisement.

Benefits include superannuation, fares to Perth for appointee and dependent family, removal allowance, study leave and long service leave and housing loan scheme.

Applications in duplicate stating full personal particulars, qualifications and experience and the names and addresses of three referees should reach the Staffing Officer, University of Western Australia, Nedlands, Western Australia 6009.
24th March 1984.

The Australian National University

Research School of Pacific Studies

POSTDOCTORAL FELLOW/RESEARCH FELLOW/SENIOR RESEARCH FELLOW – DEPARTMENT OF ECONOMICS

The Department of Economics is concerned with international economics, both theory and applied, and with the economics of developing countries in the Asia-Pacific region. More than one position may be available. While normally Research Fellow/Senior Research Fellow positions are for three years, with possible extension to five, appointment for one or two years may also be considered. These would be suitable for persons on leave from other institutions.
30th March 1984.

SENIOR LECTURER/ LECTURER – DEPARTMENT OF ECONOMICS

Applications are invited for appointment to a Senior Lectureship or Lectureship in Department of Economics. Preference may be given to persons with interests in theoretical and applied fields related to microeconomics. For appointment to a Senior Lectureship the successful candidate should have substantial lecturing experience and a proven research capacity.
23rd March 1984.

POSTDOCTORAL FELLOW/RESEARCH FELLOW/SENIOR RESEARCH FELLOW – DEPARTMENT OF INTERNATIONAL RELATIONS

The Department seeks to make an appointment in the international relations of East and/or Southeast Asia. Applicants should be interested in foreign policies and in historical and multilateral relationships in either or both of the two areas, and should not confine themselves to the internal affairs of particular countries.
30th March 1984.

POSTDOCTORAL FELLOW/RESEARCH FELLOW/SENIOR RESEARCH FELLOW – DEPARTMENT OF PACIFIC AND SOUTHEAST ASIAN HISTORY

This is an appointment in Pacific History. The Department concerns itself with the pre-colonial period, the colonial processes and indigenous responses to it, and the emergence of new political and cultural patterns in the post-colonial era across its region of interest.

Applications are invited from scholars qualified to do research in this general field. As well, because of current concentrations of work in the Department, applications in the following special fields would be of particular interest: a) medical history; b) recent history – the last 10–20 years in the region; c) comparative history – bringing theory and practice developed in another area to bear on Pacific history.

An appointment may be made either for a two-year period or for an initial term of three years with possible extension to five years.
30th March 1984.

Faculty of Economics and Commerce

SENIOR LECTURER/ LECTURER IN ACCOUNTING OR INFORMATION SYSTEMS

Department of Commerce

The Department was formerly the Department of Accounting and Public Finance. A new Bachelor of Commerce degree is being offered for the first time in 1985.

Candidates should have high level academic qualifications in accounting or related disciplines, a strong analytic background, a good teaching record together with a good research record and/or appropriate commercial experience. Interests may lie in one or more of the following areas: auditing, E.D.P. and accounting information systems, finance, financial accounting, government accounting, management accounting and quantitative methods.
30th March 1984.

Appointment, unless otherwise stated, will be: Senior Lecturer/Lecturer for four years in the first instance with the possibility of reappointment, after review, to retiring age. Senior Research Fellow/Research Fellow normally up to three years with the possibility of extension to a maximum of three years.

Grants are provided towards travel and removal. Assistance towards housing is given to appointees from outside Canberra. Eligible appointees will be required to join the Superannuation Scheme for Australian Universities. The University reserves the right not to make an appointment or to make an appointment by invitation at any time.
30th March 1984.

Please quote reference 1008/TV1025

Southampton THE UNIVERSITY

Sub-Department of Engineering Materials

RESEARCH FELLOW/ ASSISTANT FOR NUMERICAL ANALYSIS IN FRACTURE MECHANICS

Applications are invited for a MOD(PE) Research Fellow or Assistant to work on the application of the Boundary Element Method to the determination of stress intensity factors for three-dimensional cracks in aircraft structures. The successful candidate is expected to have a good first degree in Engineering, Physics or Mathematics and, for the Research Fellowship, to have relevant post-graduate experience ideally with the Boundary Element Method.

The initial salary is within the scale 1A £7,190–£11,615 per annum, for Research Fellow and within scale 1B £5,310 – £8,530 for Research Assistant with placement according to age and experience.

Further particulars may be obtained from Dr D. J. Cartwright, Engineering Materials, The University, Southampton SO9 5NH. Applications giving curriculum vitae and the names of two referees, should be sent to Mr D. A. S. Copland, The University, Southampton SO9 5NH, *quoting reference no. 2020*

Southampton THE UNIVERSITY

CHAIR OF CHEMISTRY

Applications are invited for a Chair of Chemistry made vacant by the retirement of Professor M. Fleischmann. The Department wishes to make an appointment in an area of electro-chemistry. Candidates with interests in the applications of materials science, solid state chemistry or surface chemistry are also welcomed.

Further details may be obtained from the Secretary and Registrar, The University of Southampton SO9 5NH, to whom applications (10 copies from persons in the UK) should be sent before 30th April 1984. Interested persons may also write informally to the Chairman of the Department of Chemistry, Professor G. R. Luckhurst.

University of Southampton

DEPARTMENT OF COMPUTER STUDIES

Systems Programmer (Temporary)

Applications are invited for the post of Systems Programmer in the Department. The person appointed will maintain and develop systems software for the department's three UNIX systems (DEC PDP11/34, 11/70 & PR 2050), and develop software to assist the Department's teaching and research programmes. Fluency in programming in a high-level language such as Pascal or C is essential; experience of UNIX is desirable.

The post is available until 30 September 1985. Salary on Scale 1A, between £7,190 and £8,530, dependent on age and experience.

Applications (4 copies) should be sent to Mrs. E. C. P. Sears, Staffing Department, University of Southampton, Highfield, Southampton SO9 5NH, not later than 15 March 1984. Please quote reference 1008/TV1025

University of London

Faculty Officer for Science and Engineering

Applications are invited for the post of Faculty Officer for Science and Engineering which will become vacant on 1st August, 1984. The post is within the federal offices of the University of London.

The Faculty Officer is responsible at federal level for the administration of academic affairs in the faculties of Science and Engineering. The duties of the post will include servicing of a number of committees concerned with academic activities in these faculties, and the provision of advice on policies in these areas.

Applicants must hold a degree or equivalent qualification and have experience of administration and of working as Secretary to Committees.

The appointment will be within Grade III of the national salary structure for University Administrative Officers, currently £13,515–£16,925 per annum plus £1,186 London Allowance.

Letters of application, with full curriculum vitae and the names and addresses of three persons to whom reference may be made, should be sent to the Personnel Officer, University of London, Room 222, Malet Street, London WC1E 7HU. Tel: 01-636 8000, ext. 3248 from whom further particulars are available.

Closing date for receipt of applications: 9th March, 1984. (14225)

KING'S COLLEGE LONDON
University of London

Appointment of Principal

The appointment of the Principal of King's College, Lord Cameron, comes to an end on 31st July 1985 and it is intended that a successor should be appointed from 1st August 1985.

The Principal is the chief academic and administrative officer of the College.

The salary is negotiable and living accommodation is provided.

King's College is due to merge in 1985 with Queen Elizabeth College and Chelsea College to form a single School of the University of London under the name of King's College London, and the person appointed to the post of Principal will be head of the combined College.

Persons interested in being considered for this appointment, or wishing to suggest the names of others, are invited to write in confidence not later than 31st March 1984 to The Rt. Hon. Earl Jellicoe, DSO, MC, Chairman of the Council, King's College London, Strand, London WC2R 2LS, from whom further particulars are available.

(14269)

University of London

THE WARBURG INSTITUTE

Secretary/Registrar

Applications are invited for the post of Secretary/Registrar of the Warburg Institute, University of London. Duties will be taken up at a time to be arranged with the successful candidate (preferably before 1st October, 1984). Administrative experience in an institution of higher education or learned body and knowledge of one or more foreign languages are desirable. Salary within Grade III of the National Salary scales for University Administrative Staff, £13,515 to £16,925 per annum plus £1,186 per annum London Allowance will be determined having regard to qualifications, age and experience.

Letters of application should be sent by 12th March, 1984 to the Director, Warburg Institute, Woburn Square, London WC1H 0AB (Tel: 01-580 9663), from whom further particulars are obtainable. (14224)

University of Strathclyde
DEPARTMENT OF LIBRARIANSHIP

Chair of Librarianship and Information Science

The University invites applications from suitably qualified applicants for the Chair of Librarianship and Information Science. The successful applicant will be Head of the Department of Librarianship.

Further particulars and application forms are available from: The Registrar, McCance Building, 16 Richmond Street, Glasgow G1 1XQ.

Closing date for applications: 30th March, 1984 (14233)

Courses

NAPE – Partners in Learning for Primary Education

National Association for Primary Education one week Residential Courses 14–20, April, 1984 at Whitelands College, West Hill, Putney SW15, for LECTURERS IN TEACHER TRAINING who are required to update their knowledge of primary school practices.

WORKING IN THE PRIMARY CLASSROOM

for Lecturers likely to be re-assigned from Secondary to Primary work in colleges and for Specialist Lecturers teaching Primary Professional Studies. Fee £160 including residence and tuition. Opening Speaker, Pauline Perry M.P.

Full details from: NAPE Centres Director, Whitelands College, Putney SW15 3SN (004)

Universities continued

UNIVERSITY OF BIRMINGHAM
Faculty of Commerce and Social Science
Development Administration Group

LECTURER IN DEVELOPMENT ECONOMICS

To contribute to the teaching, research and advisory activities of the Development Administration Group within the Institute of Local Government Studies. These focus particularly upon regional and local development programmes and government agencies in Third World countries. Applicants should have qualifications and, preferably, experience in the fields of:

either public finance
or development planning and management.

They should be willing to undertake periodic short assignments overseas. The appointment, which will be for three years in the first instance, will be made in the salary range £7,190 to £14,125 (subject to review) plus USS. Further particulars and application form from Assistant Registrar (Commerce), University of Birmingham, P.O. Box 363, Birmingham B15 2TT, to whom the form should be returned by 2 April 1984, quoting C/296/RR. (14264)

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

RELIABILITY ENGINEERING

Applications are invited for the post of RESEARCH ASSISTANT from 1st April 1984 in the Department of Chemical Engineering to work on a three-year contract for the Health and Safety Executive investigating the reliability of over pressure protection systems for exothermic reactors. Candidates must have suitable experience in the process industries and preferably a higher degree. Salary on the scale £7,190–£8,530.

Further details and application form from Mr R. J. Aird, Department of Chemical Engineering.

Loughborough Leicestershire (14255)

University of Birmingham
Health Services Management

TWO LECTURESHIPS

Applications invited for two lectureships in the Centre, which is engaged in a wide range of teaching and research activities, principally on behalf of the NHS and other growing overseas interests.

The main responsibility of the post will be to co-ordinate and help provide the Centre's teaching and material contributions to the national management training scheme for NHS administrative staff. Candidates with a background in any discipline relevant to the study of health care management will be considered, but applications are particularly sought from those with experience and research interests in one or more of the following fields: social psychology; organisation behaviour; statistics; information technology; experience of health service management.

Post two. The duties of this post, created to help meet the increased demand for the Centre's services, will depend on the background, qualifications and experience of the person appointed. The post will interest young graduates considering a career in health service management studies.

Both posts are tenable for three years in the first instance, with the prospect of renewal.

The salary will be on the lecturer A scale (£7,190 to £14,125 plus superannuation). Further particulars from Mrs Joanna Butler, Senate Registry, The University, P.O. Box 363, Birmingham, B15 2TT, to whom applications (2 copies) including curriculum vitae and the names of three referees should be sent by Wednesday, 14th March 1984. H1

University of Reading

APPOINTMENT OF BURSAR

Applications are invited from suitably qualified persons for the post of Bursar, which will become vacant on the retirement of Mr J. Hutchinson on 31 December 1984.

The Bursar has general responsibility for the financial business of the University and associated administrative services. He is also responsible for the investment and sale of real estate sources, the investment of University funds and especially for the development of the estate, land and properties including the University's farms.

Further particulars of the post may be obtained from the Registrar (Room 214, Whiteknights House). The University, Whiteknights, Reading RG6 2AH. The closing date for applications is 16th March 1984. H1

The University of Papua New Guinea
Port Moresby
Department of Human Biology

LECTURER IN BIOCHEMISTRY – P821004/84

Applications are invited for the above position which will become vacant in June 1984.

The Department undertakes the pre-clinical training of medical and dental students in Biochemistry, Anatomy, Pharmacology and Physiology, and is responsible for a postgraduate course in basic medical sciences. Departmental and University-supported research is encouraged. The successful applicant will have had teaching experience in biochemistry to medical students. It is the aim of the Department to present the preclinical medical subjects in functional and clinically relevant context, and therefore a medical qualification would be an advantage. Experience in teaching/research appreciated in a developing country.

Salary: Lecturer II K18870 per annum plus gratuity. Lecturer I K16050 per annum plus gratuity.

Other conditions: The successful applicant will be offered a contract for a three years appointment. The gratuity entitlement is based on 30% of salary earned and is payable in instalments during and is taxed as a flat rate of 2.5%. In addition to the salaries quoted above, the main housing, leave passages, and approved research, rent-free accommodation, appointment and repatriation airfares, superannuation and dependants; financial assistance towards the cost of transporting personal effects to and from PNG; assistance with home airfares available after each 6 months of continuous service; assistance with education subsidies for children attending schools in Australia or overseas; a salary continuation scheme to cover extended illness of disability.

Applications will be treated as strictly confidential and should include a full curriculum vitae, present salary, photograph and the names and addresses of two referees. In order to expedite this appointment procedure applicants are advised to ask their referees to send confidential reports directly to the University without waiting to be contacted. Silver airmail should be forwarded to the Deputy Registrar, The University of Papua New Guinea, PO Box 320, University, Papua New Guinea, to reach him not later than 30 March 1984. Candidates resident in the UK should send an additional copy to the Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF. H1

The University of Lancaster
Department of Computing

SYSTEMS AND APPLICATIONS PROGRAMMERS

In the first stage of a major expansion of the University's Computing Service, four new programming posts have been created. Three of these posts will be permanent and one, for a period of five years. The primary responsibilities associated with the posts are supporting and developing the following areas:

Post 1: VME System on the ICL 2960
Post 2: VMS System on the Digital VAX 11/780
Post 3: Graphics
Post 4: External facilities, particularly those provided by the University Manchester Regional Computer Centre (5 year fixed term).

We require people with a positive and imaginative approach to developing a computing service which aims to maximise the benefits of computing to the University's research and teaching activities by exploiting existing skills in certain areas, but also people with experience in new application areas are especially welcome.

Salary on the Other Related 1A range (£7,190–£11,615 per annum).

Further particulars may be obtained (quoting reference LS1/84) from the Establishment Officer, University, Bailrigg, Lancaster LA1 4YW, where applications (five copies) naming three referees, should be sent not later than 9th March 1984. H1

The University of Lancaster
Department of Educational Research

LECTURESHIP IN EDUCATIONAL ORGANISATION AND MANAGEMENT

Applications are invited for a tenured lectureship in Educational Organisation and Management to teach mainly on the M.A. in Education programme. Candidates should have had practical experience of management in the education or any other sector, and a relevant area of study would be an advantage.

Salary will be in the range £7,190 to £14,125 according to age, qualifications and experience.

Further particulars may be obtained (quoting reference LC1/84) from the Establishment Officer, University, Bailrigg, Lancaster LA1 4YW, where applications (five copies) naming three referees should be sent not later than 16th March 1984. H1

University of Glasgow

CHAIR OF PATHOLOGY, WESTERN INFIRMARY

Applications are invited for the above post tenable from 1st October, 1984.

Further particulars may be obtained from the Secretary of the University, Glasgow G12 8QQ, where applications (6 copies), copy to the date of overseas applicants) together with the names and addresses of not more than three referees, should be lodged on or before 9th April, 1984.

In reply please quote Ref. No. 52/84A/E&T. H1

The University of Aston in Birmingham
Department of Modern Languages

LECTURESHIP IN FRENCH

Applications are invited for the above appointment in the Department of Modern Languages. The Department consists of specialists in French, German and Linguistics, each of which is offered as a single subject or joined in combined honours subject within two undergraduate degree schemes and two taught Masters degrees. Facilities also exist for research students to follow individual projects to MPhil and PhD.

The "ideal" academic background for the post would be a first degree in French, followed by a postgraduate qualification in contemporary French politics. Candidates should have research interests in an aspect of contemporary French political or social history and the ability to lecture and give seminars in French.

The appointment will be for a period of three years initially, with the possibility of renewal or subsequent transfer to a continuing appointment. Initial salary within the range up to the maximum of the scale £7,190 to £14,125 per annum.

Application forms and further particulars may be obtained from the Staff Officer (quoting Ref.: 392/136), University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET. Tel: 021-359 3611 Ext. 4564. Closing date for the receipt of applications is 23rd March 1984. H11

University of Dundee
Department of Education

A TEMPORARY LECTURER IN EDUCATION

is required to teach on the Diploma in Social Work course and to take part in the Department's part-time M. Phil candidates.

Applicants should have a higher degree in Education and a first-hand experience in primary or secondary education. Experience will be given to those whose main interest is in the social aspect of the theory or practice of education. A supporting interest in psychology (including continuing) education would be an advantage.

The appointment will be made for a fixed period of up to three years during which there will be a major review and perhaps reconstruction of Education teaching in the University. The post may therefore be particularly suitable for someone who would be seconded from his or her present post to an early branch of education. The salary will be £7,190–£14,125 per annum.

Further particulars are available from the Personnel Office. The University, Dundee DD1 4HN, to whom applications (6 copies) should be lodged by 30th March 1984. Please quote reference EST/9/84. H1

The University of Sheffield
Departments of Metallurgy and Mechanical Engineering

The Fracture Initiation and Hydrogen Embrittlement of Spring Steels

A POST-DOCTORAL RESEARCH FELLOW

is required to work on an SERC-funded project in the Metallurgical and engineering aspects of the initiation and embrittlement of electrogalvanised high tensile spring steels. The University based work will cover with fundamental aspects of this problem in conjunction with those of more applied study at the Spring Research and Manufacturers Association's Sheffield laboratory. The work will involve a computer-assisted study of the correlation between macroscopic stress and strain and micro-structural features of the steels. The person appointed will undertake microstructural examination and mechanical testing, adapting an analytical approach towards new test procedures and evaluation of data.

Tenable for 3 years from 1 April 1984 or as soon as possible thereafter. Initial salary up to £6,810 per year on Range 1A, plus USS benefits. Applications from Professor C. M. Brown, Department of Metallurgy, The University, Mappin Street, Sheffield S1 3JD (Tel: 0742-78555, Ext. 4588) from applicants (quoting a reference No.) should be sent by 7 March, 1984. Quote ref. No. M7. H1

(University of London) Birkbeck College

LECTURESHIP IN CLASSICS

Applications are invited for the post of Lecturer in Classics, tenable from 1 October 1984. Preference will be given to candidates whose research interests and main interests lie in the field of Greek literature of the Classical period and Greek literature after the Classical period on the subject area. Salary will be within the range £7,190 – £14,125 per annum (under review) plus £1,380 London Allowance. Further particulars may be obtained from the Secretary, Birkbeck College, Malet Street, London WC1E 7HX (telephone 01-580 6822, ext. 383). Otherwise, applications (6 copies) together with the names and addresses of not more than three referees, should be lodged on or before 9th April, 1984.

In reply please quote Ref. No. 84/85. H1

University of Cambridge
Churchill College

LECTORSHIP IN ECONOMICS

Churchill College expects to be able to appoint a lector in Economics for one year, the October 1984. The Lector will be required to undertake 150 hours of teaching and the salary will be £6,530 p.a. grant will be based on the SSRC Research Studentship maintenance grant, with payment made in addition for fees. The supervision; the successful candidate will receive the same dining privileges as a Fellow, and the shared use of a room in College for supervision purposes.

The duties would suit a Research Student or recent PhD graduate who seeks financial support for the continuation of his/her research, some teaching experience would be an advantage. Applications giving full information concerning qualifications and experience and the names of two persons to whom reference can be made concerning the candidate should be sent to the Tutor, Churchill College, Cambridge, to reach him by Friday, 23 March 1984. H1

University of London
Chelsea College
Department of Electronics

LECTURER

Applications are invited from suitably experienced candidates to fill an academic initiative vacancy in the Department of Electronics. Chelsea College. The Department has research expertise in satellite communication systems associated microwave circuit technology, material processing and relevant computing techniques. Background of research in one of these areas is required. The Lecturer will be joining an enthusiastic research team working in a lively environment.

The current salary scale is £7,190 to £14,125 (under review) plus £1,185 London Allowance. Technical enquiries can be made to Professor C. B. Atchison, Department of Electronics (tel: 01-736 1244).

Application forms and further particulars can be obtained from the Registrar's Office, Chelsea College, University of London, 552 King's Road, London SW10 0UA. Closing date: 9th March 1984. H1

University of Southampton

RESEARCH FELLOW IN PAEDIATRIC/DEVELOPMENTAL PSYCHOLOGY

(Assessment of Drug Effects on the New Born Human)

Applications are invited for this above post. The Research Fellow will initially be involved in the formation of a battery of skills and will subsequently be responsible for the development of the battery.

Salary on Grade 1A of the National Scale (£7,190 - £11,615 p.a.)

Applications (three copies) from candidates resident within the United Kingdom and one from others) giving date of birth, a full curriculum vitae and the names and addresses of two referees should be sent to Dr Gillian Rushton, Department of Psychology, University of Southampton, Highfield, SO9 5NH, as soon as possible. Please quote ref. 7/1186. H1

University of Warwick

LECTURESHIP IN ARTS EDUCATION (PRIMARY)

Applications are invited for the post of Lecturer in the Department of Arts Education tenable from October 1984. The successful candidate will teach professional courses to prospective primary teachers. Specialist interests in dance, drama and related arts or in language development/arts/creative literature would be an advantage.

Salary on the Lecturer scale: £7,190–£14,125 p.a.

Further particulars and application forms from the Registrar, University of Warwick, Coventry, CV4 7AL (tel: 0203 24388 ext. 2057, please quote reference No: 26/A) to whom completed applications should be sent by 16 March 1984. Quote ref. No. H7. H1

Closing date for receipt of applications: 16th March, 1984. H1

University of Oxford
School of Geography

A vacancy will occur for a

DEPARTMENTAL DEMONSTRATOR

in any field of geography from October 1984. Three year appointment in the first instance with a requirement to undertake up to 6 hours per week of undergraduate teaching, tuition and research. College lecturing stipend £2,310 per annum. Salary £6,810 per annum rising to £7,190 per annum. Applications (stating qualifications, experience in teaching and research) to the Secretary, Department of Geography, Mansfield Road, Oxford OX1 3TB, by 16th March 1984. No application forms. Candidates who would be required to give a lecture should be prepared to do so at short notice before the appointment is made. H1

University of Reading
Department of Land Management and Development

Applications are invited for a

LECTURESHIP IN RURAL LAND MANAGEMENT

Candidates should be graduates in Land Management with practical experience in rural estate organisation, agricultural valuation, agricultural land management and rural planning.

The appointment will be for a period of 5 years, initial salary up to £6,530 p.a. on the scale £7,190 to £14,125 p.a. plus USS/USDH benefits.

Further particulars and application forms (2 copies) are available from the Registrar (Staff Appointments), The University of Reading, Whiteknights, Reading, RG6 2AH (telephone (0734) 875123 ext. 845. Please quote ref. AC 1984. Closing date 14 March 1984. H1

University of Birmingham

ADMINISTRATIVE ASSISTANTS

Applications are invited for two posts of Administrative Assistant in the Registry Office. Good Honours degree and sound administrative experience, preferably in an academic environment, are required.

Post A: Principal duties will be in the areas of student admissions, registration and accommodation. Liaison, including some committee servicing.

Post B: To run a small section dealing with undergraduate examinations, scholarships and other aspects of central academic administration.

Salaries on scale £6,310–£7,190 plus superannuation.

Applications by 19th March 1984 to Senior Assistant Secretary, University of Birmingham, P.O. Box 363, Birmingham B15 2TT, from whom further particulars and application forms may be obtained. H

University of Southampton

RESEARCH FELLOW IN PAEDIATRIC/DEVELOPMENTAL PSYCHOLOGY

(Assessment of Drug Effects on the New Born Human)

Applications are invited for this above post. The Research Fellow will initially be involved in the formation of a battery of skills and will subsequently be responsible for the development of methodology.

Salary on Grade 1A of the National Scale (£7,190 - £11,615 p.a.)

Applications (three copies from candidates within the United Kingdom and one from others) giving date of birth, a full curriculum vitae and the names and addresses of two referees should be sent to Dr Gillian Rushton, Department of Psychology, University of Southampton, Highfield, SO9 5NH, as soon as possible. Please quote ref. 7/1186. H1

The City University
Control Engineering Centre

LECTURESHIP IN CONTROL ENGINEERING

Applications are invited for a Lectureship in the Control Engineering Centre of the School of Electrical Engineering and Applied Physics. Preference will be given to candidates with an established research competence and ability to teach control engineering at undergraduate and postgraduate levels. Suitable industrial experience will also be advantageous.

The appointment will be offered for five years in the first instance, from October 1st, 1984 or sooner if possible, and will be on the scale £6,576 to £8,391 per annum London Allowance.

Application forms and further particulars may be obtained from the Academic Registrar's Department, City University, Northampton Square, London EC1V 0HB. Telephone 01-253 4399 ext. 2057. Please quote reference CE/84/RR. Closing date 22nd March, 1984.

University of Nottingham
Department of Zoology

LECTURESHIP IN ZOOLOGY

Applications are invited for a lectureship in the field of Animal Behaviour, preferably from those with research experience in social aspects of developmental aspects of behaviour. Candidates are featuring interests in behavioural ecology and ecology.

The salary will be in the salary range £7,190 to £14,125 per annum and will start in September, 1984.

Further particulars and application forms, to be returned by 23rd March, 1984, may be obtained from the Assistant Secretary (Academic), The University, Nottingham NG7 2RD. Telephone 0602 506101 (24 hour answering service). H1

University of Oxford
Clarendon Laboratory

TEMPORARY LECTURESHIP IN PHYSICS

A vacancy exists for a lectureship in Physics to be held with the Association of Electronics in the Honours School of Physics. The post is for two years starting October 1st 1984 but it is possible that an association with Keble College may be offered to the successful candidate.

Applications (8 copies — 1 from applicants overseas) and resumés from further information should be sent to Professor D. J. Bradley, Clarendon Laboratory, Parks Road, Oxford, OX1 3PU, by April 21st. H1

University of Oxford
Chemistry Research Laboratory

RESEARCH ASSISTANT

Applications are invited for the above post tenable for one year from 1 October 1984. Candidates may have special interest within any branch of statistics.

Initial salary will depend on qualifications and experience on the scale £7,190 to £14,125.

Further particulars from the Registrar, University of Leicester, University Road, Leicester, LE1 7RH, to whom applications on the form provided should be sent by 16 April 1984. H1

University College Dublin

Applications are invited by the Governing Body of the College for the following full-time statutory appointment:

PROFESSORSHIP OF LOGIC AND PSYCHOLOGY

Prior to application, further information (including application procedure) may be obtained from the Secretary and Bursar, University College, Belfield, Dublin 4. Telephone enquiries 693344 Ext. 431.

The closing date for receipt of completed applications is Thursday, 22nd March, 1984. H1

University of Manchester
Department of Government SSRC British Political Elections Study

RESEARCH ASSISTANT

Applications are invited for the above post tenable for one year from 1 October 1984. Candidates should have a good honours degree in social science, preferably in politics or government. Experience in survey research and computer-based analysis of quantitative data would be an advantage. A completed doctorate in political science or a related discipline at the appointment is tenable for two years. Commencing May 1st, 1984. Salary range £7,190 – £8,530 p.a. (depending on qualifications). Applications, including the names of three referees, should be sent as soon as possible to Professor G. Parry, Department of Government. Further details are available from Mrs Heidi Cowell, Department of Government, (061) 273 2715 ext. 5039 or 3043. Closing date March 2nd 1984. H1

University of Exeter

TUTOR

Applications are invited for a post of Tutor in the Department of Economic History. Preference will be given to candidates specialising in British economic and social history before 1914, and international economic history since 1914.

The post is tenable for one year from 1 October 1984. Salary will be £6,810 per annum.

Further particulars available from the Personnel Office, University of Exeter, Exeter EX4 4QJ. Closing date: 17th March 1984. H1

University of Oxford
Clarendon Laboratory

TEMPORARY LECTURESHIP IN PHYSICS

A vacancy exists for a lectureship in Physics to be held with the Association of Electronics in the Honours School of Physics. The post is for two years starting October 1st 1984 but it is possible that an association with Keble College may be offered to the successful candidate.

Applications (8 copies — 1 from applicants overseas) and resumés from further information should be sent to Professor D. J. Bradley, Clarendon Laboratory, Parks Road, Oxford, OX1 3PU, by April 21st. H1

University of Glasgow

DEAN OF POSTGRADUATE MEDICINE

Applications are invited for the above post which has fallen vacant on the retiral of Professor G. C. Tibbetts.

Further particulars may be obtained from the Academic Personnel Officer, University of Glasgow, Glasgow, G12 8QQ, where applications (6 copies, 1 copy in the case of overseas applicants), together with the names and addresses of not more than three referees, should be lodged on or before 30th April, 1984.

In reply please quote Ref. No. 52037 H1

University of Leicester
Department of Mathematics

TEMPORARY LECTURESHIP IN STATISTICS

Applications are invited for the above post tenable for one year from 1 October 1984. Candidates may have special interest within any branch of statistics.

Initial salary will depend on qualifications and experience on the scale £7,190 to £14,125.

Further particulars from the Registrar, University of Leicester, University Road, Leicester, LE1 7RH, to whom applications on the form provided should be sent by 16 April 1984. H1

University of Exeter
Department of Physics

THEORETICAL POST-DOCTORAL RESEARCH FELLOWSHIP

Applications are invited for this post funded by SERC to study and develop theories for the velocity of dislocations in semi-conductors.

The post is tenable from 1 October 1984 for one year in the first instance with the possibility of renewal for two more years. Initial salary will be on the range £6,190 – £7,630 per annum.

Applications together with the names of two referees should be sent to Dr R. Jones, Theoretical Physics Laboratory of Exeter, Exeter EX4 4QL, by 30 April 1984. H2

Polytechnic of Central London
School of Computer Science

RESEARCH FELLOWSHIP IN COMPUTER SCIENCE

Applicants are invited for the post of Research Fellow in Computer Science. The field of research will be in highly parallel computers.

The appointment is for two years, extendable to three and the salary will be in the range of £8,905–£10,788 p.a. inclusive of London Allowance. Application forms from the Personnel Officer, 309 Regent Street, London W1R 8AL. Closing date: 8th March 1984. H2

University of Oxford
St Cross College

ICL RESEARCH FELLOWSHIP IN FUNCTIONAL PROGRAMMING

Applications are invited for a Junior Research Fellowship tenable at St Cross College, Oxford. Suitable candidates should be under 30 years of age and will be interested in using techniques of functional and logic programming in some substantial area of application.

The post has been provided by the generous support of International Computers Limited for an initial period of 2 years (with good prospects of renewal).

The salary is on the University Lecturer Scale (£7,190 to £8,875, according to age). Applications, including curriculum vitae, outline of proposed research and the names of two referees, should be sent by 31 March 1984 to:

The Master, St Cross College, Oxford OX1 3LZ
(For further details, contact Dr J. Lloyd (0865) 54141, Ext. 2841). H2

University of Exeter
Department of Physics

THEORETICAL POST-DOCTORAL RESEARCH FELLOWSHIP

Applications are invited for this post funded by SERC to study and develop theories for the velocity of dislocations in semi-conductors.

The post is tenable from 1 October 1984 for one year in the first instance with the possibility of renewal for two more years. Initial salary will be on the range £6,190 – £7,630 per annum.

Applications together with the names of two referees should be sent to Dr R. Jones, Theoretical Physics Laboratory of Exeter, Exeter EX4 4QL, by 30 April 1984. H2

University of Durham

ISABEL FLECK RESEARCH FELLOWSHIP 1984

The Council of the University of Durham invites applications for the Isabel Fleck Research Fellowship from 1 October 1984 or such later date as may be agreed, for a period of one year.

The Isabel Fleck Fellowship was established by Lord Fleck, in memory of his wife. It is intended to further research into English or Scottish mediaeval history up to c. A.D. 1400 by enabling graduates of the University of Durham to study at some place other than Durham or else by enabling graduates of other Universities to study in Durham. It is expected that Fellows will have had considerable research experience before appointment.

The salary will be at an appropriate point within National Scale 1A (£7,190–£11,615).

Applications (three copies), including the names of three referees, should be submitted not later than 9 March 1984 to the Secretary of the Society of Fellows, Old Shire Hall, Durham DH1 3TP, from whom further particulars may be obtained. H2

University of Oxford
St Cross College

ICL RESEARCH FELLOWSHIP IN FUNCTIONAL PROGRAMMING

Applications are invited for a Junior Research Fellowship tenable at St Cross College, Oxford. Suitable candidates should be under 30 years of age and will be interested in using techniques of functional and logic programming in some substantial area of application.

The post has been provided by the generous support of International Computers Limited for an initial period of 2 years (with good prospects of renewal).

The salary is on the University Lecturer Scale (£7,190 to £8,875, according to age). Applications, including curriculum vitae, outline of proposed research and the names of two referees, should be sent by 31 March 1984 to:

The Master, St Cross College, Oxford OX1 3LZ
(For further details, contact Dr J. Lloyd (0865) 54141, Ext. 2841). H2

University of Exeter
Department of Physics

THEORETICAL POST-DOCTORAL RESEARCH FELLOWSHIP

Applications are invited for this post funded by SERC to study and develop theories for the velocity of dislocations in semi-conductors.

The post is tenable from 1 October 1984 for one year in the first instance with the possibility of renewal for two more years. Initial salary will be on the range £6,190 – £7,630 per annum.

Applications together with the names of two referees should be sent to Dr R. Jones, Theoretical Physics Laboratory of Exeter, Exeter EX4 4QL, by 30 April 1984. H2

University of Durham

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Victoria University of Wellington

JOHN DAVID STOUT RESEARCH FELLOWSHIP IN NEW ZEALAND CULTURAL STUDIES 1984-5

The Fellowship, now offered for the first time, has been funded for an initial three year period by the Stout Trust. It has been created to foster research in New Zealand cultural studies by providing the Fellow with full-time opportunity to write within an academic environment for the year of the tenure. The Fellowship is open to researchers in any area of study relating to New Zealand culture, but is not intended to fund the writing of a novel, play or other literary work. Applicants should be scholars of high standing, either from within New Zealand or overseas, who have a particular project they wish to complete. Preference is not restriction on the occupation of applicants, and Fellowship is open to both university staff and others.

Salary within the range of NZ$24,650 – NZ$34,587 dependent upon qualifications and experience.

Conditions of Appointment and method of application are available from the Secretary General, Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF, or from the Administrative Assistant (Appointments), Personnel Office, Victoria University of Wellington, Private Bag, Wellington, New Zealand, with whom applications close on 31 March 1984. H2

University of Oxford
St Cross College

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Polytechnic of Central London
School of Computer Science

RESEARCH FELLOWSHIP IN COMPUTER SCIENCE

Applicants are invited for the post of Research Fellow in Computer Science. The field of research will be in highly parallel computers.

The appointment is for two years, extendable to three and the salary will be in the range of £8,905–£10,788 p.a. inclusive of London Allowance. Application forms from the Personnel Officer, 309 Regent Street, London W1R 8AL. Closing date: 8th March 1984. H2

ROYAL NORTHERN COLLEGE OF MUSIC

IDA CARROLL RESEARCH FELLOWSHIP

Applications are invited for the award of the Ida Carroll Research Fellowship for one year from September 1984.

This fellowship is valued at £3,500 and exists to enable postgraduate scholars of outstanding ability to undertake periods of advanced study "with a view to perfecting their skills and scholarship".

Please apply to: Dean of Postgraduate Studies, Royal Northern College of Music, 124 Oxford Road, Manchester M13 9RD, enclosing curriculum vitae and study proposals.

Closing date for applications: 31st March 1984

(14231)

Leicester Polytechnic

Head of school of Industrial Design

(Post No 62)

Applications are invited from persons with substantial relevant experience for the above post. The prime function of the person appointed will be the leadership of the School in its teaching, funding and research activities and to form links with industry and the professions.

A successful candidate, male or female who meets the appropriate criteria may be granted the title of Professor in the Polytechnic.

Head of school of Graphic Design

(Post No 55)

Applications are invited from persons with substantial relevant experience for the above post. The prime function of the person appointed will be the leadership of the School in its teaching, fund raising and research activities. Candidates from the fields of Information Design or Design Marketing will especially be welcomed.

A successful candidate, male or female who meets the appropriate criteria may be granted the title of Professor in the Polytechnic.

Salary for Post No 62 will be on the Head of Department (VI) scale £16,632 by 4 annual increments to £18,327.

Salary for Post No 55 will be on the Head of Department (V) scale £16,390 by 4 annual increments to £17,091 for a non-professorial appointment. Salary for a Professorial appointment will be on the Head of Department (VI) scale – £16,632 by 4 annual increments to £18,327.

Application forms and further particulars are available from the Personnel Officer, Leicester Polytechnic, P.O. Box 143, Leicester LE1 9BH. Tel: (0533) 551651 Ext. 2303.

Closing date: 9th March, 1984.

EQUAL OPPORTUNITIES POLICY:
Applications are welcome from suitably qualified and/or experienced people regardless of race, ethnic origin, religion, sex, marital status or disability.

Queen Margaret College
EDINBURGH

HEAD OF DEPARTMENT OF HEALTH AND NURSING

Applications are invited from suitably qualified graduate Nurses for the above post which becomes vacant 1 September 1984 upon the retirement of the present incumbent. The person appointed will be expected to lead a team of Nurses in the development and implementation of a degree, post-registration and continuing education, courses in Nursing and will be expected to develop research and professional advancement programmes within the Department.

Salary: £18,144

Application forms and further particulars may be obtained from the College Secretary, Queen Margaret College, Clarewood Terrace, Edinburgh EH12 8TS.

Closing date for applications: 9 March 1984 (14281)

POLYTECHNIC OF THE SOUTH BANK
Borough Road, London SE1 0AA

FACULTY OF ADMINISTRATIVE STUDIES
DEPARTMENT OF MODERN LANGUAGES

HEAD OF DEPARTMENT Grade V

(Ref: ML01) Re-advertisement

Applications are invited for the above post which it is hoped to fill as soon as possible. Previous applicants for this post are encouraged to reapply.

The person appointed will be responsible for a Department consisting of two Schools, each with its own Head of School, who will be responsible, for much of the day-to-day management of staff; leaving the post holder free to concentrate on the wider aspects of language teaching and also on academic development generally within the Faculty.

Salary will be in the range:
£16,377 (x 4)–£18,078 per annum inclusive of London Allowance.

Further particulars of the post and application forms are available from the Staffing Office. Tel: 01-928 8989, Ext. 2365.

Completed application forms should be returned to arrive no later than 16th March 1984. (14245)

POLYTECHNIC OF THE SOUTH BANK
Wandsworth Road, London SE1 0AA
FACULTY OF THE BUILT ENVIRONMENT
DEPARTMENT OF ESTATE MANAGEMENT

SENIOR LECTURER IN MANAGEMENT

(Ref: EM9) Re-advertised

This new post has been created to meet the expanding need for management education at postgraduate and undergraduate level within the Faculty of the Built Environment. Applications are invited from people with appropriate qualifications in management or business studies with relevant teaching and/or professional experience.

The successful candidate will join a small team teaching Management on the MSc Property Development (Project Management) course, the Faculty's growing short course programme, and the undergraduate degrees in Estate Management, Building Economics and Town Planning.

Salary will be in the range:
£11,670 to £13,410 per annum inclusive of London Allowance.

Further particulars of the post and application form may be obtained from the Staffing Office. Tel: 01-928 8989, Ext. 2365.

Closing date for receipt of completed application forms will be 12th March 1984. (14246)

Fellows

Arthur Young McClelland Moores Fellowship
University of Southampton
Department of Accounting and Management Science

We sponsor a full time Fellowship in the Department of Accounting and Management Science of the University of Southampton. Duties include both research and teaching, together with encouraging the exchange of ideas between the academic, professional and industrial branches of the accountancy world generally.

The appointment is normally for one year in the first instance. Salary will be within the appropriate University scale to a maximum which is currently £14,125.

Applications are welcomed from graduates who have pursued a professional or academic career in accountancy. Research topics related to local government or the Health Service would be of particular interest, although other areas will be considered.

Please contact Peter Williamson at the address below for further information and application details. Alternatively, for an informal discussion telephone Professor Michael Bourn or Dr Chris Chapman at the University, Southampton 559122 (Ext. 2545 or 2525). The closing date for completed applications is 30th March, 1984.

Arthur Young McClelland Moores & Co.,
Rolls House, 7 Rolls Buildings,
Fetter Lane, London EC4A 1NH.
Telephone: 01-831 7130

Arthur Young McClelland Moores & Co.
A MEMBER OF ARTHUR YOUNG INTERNATIONAL

Polytechnics

Personal

IMMEDIATE ADVANCES £100 to £50,000. Private, terms on request. Regional Trust Ltd., 661 Dorset House, Piccadilly, London W1A 4RT. Phone 01-491 8834 or 499 5428. L000

Appointments Wanted

DOCTOR IN PHILOSOPHY, specialised in Hegel's dialectic, history and philosophy and existentialism, is looking for a new position. Write to Box No. 0752. H10

Polytechnics continued

Dundee College of Technology

SENIOR LECTURESHIP IN LAW

Applications are invited from graduates in law and/or professionally qualified lawyers. The person appointed will be required to fulfil a leadership role in respect of the college's teaching and research in law. He/she will be required to play an active part in course development and research, and teach on a range of degree and diploma courses.

Salary scale: £12,228–£13,572(bar)–£15,411 with initial placing dependent upon approved previous experience. Financial assistance towards the cost of removal expenses may be payable.

Further particulars and application forms obtainable from the Personnel Officer, Dundee College of Technology, Bell Street, Dundee DD1 1HG to whom completed forms should be returned by 9th March 1984.

(14360)

PRINCIPAL LECTURER IN MATHEMATICS

(Applied to Engineering)

£12,519-15,744 pa

The successful candidate will have appropriate research/industrial/teaching experience and will be expected to take a leading role in the development of teaching and research in Mathematics applied to Engineering.

Application forms, to be returned by Friday 23rd March 1984, can be obtained with further particulars from the Personnel Officer, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

(14238)

Newcastle Upon Tyne Polytechnic

Faculty of Professional Studies

PRINCIPAL LECTURER CRIMINAL JUSTICE AND LAW ENFORCEMENT

Re-advertisement
Ref No: AS/83

Applications are invited for a Principal Lectureship to develop and lead a programme of Criminal Justice and Law Enforcement, by part-time study, directed to a wide group of professionals involved in these fields. The appointee will have extensive scope to contribute his or her own ideas, but what is envisaged is a first degree on to which BTEC Police studies, among others, could programme, perhaps subsequently developed with a postgraduate qualification for in-service students. These courses will be developed in the Polytechnic in conjunction with New College, Durham.

It is recognised that candidates for this post may have a variety of backgrounds. The Polytechnic is looking for a combination of academic qualifications, practical experience and personal qualities which will result in successful academic planning, team leadership, and course operation.

Burnham FE Principal Lecturer, £13,518–£13,938 (bar) £14,199 per annum but hoped that the appointment can be made not later than September, 1984. Previous applicants need not re-apply.

For further details and application forms please call our 24 hour answering service (0532 393126) or send a stamped and addressed foolscap envelope to Mrs Rosemary Smith, Administrative Assistant (Recruitment), Newcastle upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 8ST, to whom completed forms should be returned quoting the appointment number by 30th March 1984.

HS

Kingston Polytechnic

School of Surveying

FULL-TIME LECTURING APPOINTMENT

Chartered Surveyor or equivalent required for teaching Valuation and Land Development to final year students on BSc degree in Estate Management.

Applicants should preferably hold a degree in Estate Management or Surveying and some previous teaching experience would be an advantage.

Salary range: Lecturer II-Senior Lecturer £7,662–£14,688 including London Allowance.

Details and application forms (to be returned by 31st March) from Estate Administrator, Dept. AO, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames, Surrey KT1 2EE. Tel: 01-549 1366 ext 518.

Trent Polytechnic

Department of Business Studies

LECTURER GRADE II/SENIOR LECTURER IN BUSINESS ORGANISATION

The person appointed will have a good first degree, preferably in economics or a related subject, and possibly an MBA or similar higher degree with some specialism in Business Policy. Experience in administration/industry would be an advantage.

Department of Legal Studies

LECTURER GRADE II/SENIOR LECTURER IN LAW

Applicants should have a good honours degree in Law. A higher degree and professional experience would be an advantage.

Department of Management Studies

LECTURER GRADE II/SENIOR LECTURER IN PUBLIC SECTOR MANAGEMENT

The lecturer and tutor on a wide range of Management topics to senior and middle levels of management from a wide variety of Public Sector organisations, but to work particularly with educational and School Management on both the Diploma in Education Management and stages prefered under the In Service Teacher Training Grant Scheme (DES Circular 3/83). Candidates should be suitably qualified and have management experience in the public sector.

Department of Mechanical Engineering

PRINCIPAL LECTURER/ LECTURER GRADE II/SENIOR LECTURER IN ENGINEERING DESIGN

Required to contribute to the teaching of engineering drawing and design. Applicants should have an interest in computer aided design.

LECTURER GRADE II/SENIOR LECTURER IN INSTRUMENTATION AND CONTROL

Applicants should possess an honours degree in Mechanical, Electrical and Electronic Engineering and have had some relevant industrial and/or research experience.

Salary: Principal Lecturer – £13,518–£13,938 (bar) £14,199 per annum Senior Lecturer Grade II/Senior Lecturer – £7,815–£13,143 per annum

Further details and form of application available from The Staff Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Application to be returned as soon as possible.

HS

City of London Polytechnic

FACULTY OFFICER

Applications are invited for the post of Faculty Officer in the Faculty of Administration and Language Studies at the Old Castle Street site.

The post demands a high level of administrative ability, a willingness to take responsibility and an ability to get on well with people. A suitable experience is essential. Experience in computer based information systems would be an advantage, but a demonstrated interest would be acceptable.

This is a demanding and challenging post which offers opportunities for advancement and some training in academic administration. It is located in offices at Old Castle Street, London E1.

Conditions of service are essentially similar to those of Local Government employees. Starting salary will be £7,164 p.a. and £7,164 p.a. dependent on qualifications and experience on a scale rising to £8,487 p.a.

For further details and an application form please write to or telephone the Personnel Officer, City of London Polytechnic, Jay's Walk, London SE1 3RG. Tel: 01-403 1355 ext 2111.

Manchester Polytechnic

Hollings Faculty Department of Hotel, Catering and Institutional Management

LECTURER II IN CATERING TECHNOLOGY (HO/130)

Applications are invited from graduates in an appropriate science or technology interested in the applications of technology to catering processes and equipment. The successful applicant will be required to teach on undergraduate degree and higher diploma courses and will be encouraged to undertake relevant research.

Salary scale £7,815–£11,568 (with possible subsequent promotion to Senior Lecturer scale).

Department of Home Economics

LECTURER II IN HOME ECONOMICS (REF HO/131)

A vacancy exists for a suitably qualified graduate with expertise in nutrition and/or Health Education. The successful candidate will be expected to teach within the Food Studies area on the BA, BEd and BSc undergraduate degree courses offered by the Department. Salary Scale £7,815–£11,568. For further particulars and an application form (returnable by 9th March 1984) send a self addressed envelope quoting the appropriate reference number to the Secretary, Manchester Polytechnic, All Saints Building, Manchester M15 6BH.

HS

Colleges of Higher Education

LONDON BOROUGH OF HARROW

HARROW COLLEGE OF HIGHER EDUCATION

Applications are invited from suitably qualified candidates for the following challenging senior management appointment in the College.

FACULTY OF SCIENCE AND TECHNOLOGY

HEAD OF THE SCHOOL OF SCIENCES

(ASSOCIATE DEAN)

(Grade V and London Allowance – with the possibility of appointment to the post of the Faculty of Science and Technology)

The Associate Dean is a member of the College Management Board and of the Academic Board, and provides academic leadership for over 30 lecturers and resources leadership for the development of courses and subjects which comprise the Faculty programme.

Applicants, should have a research background, proven administrative ability and be fully conversant with the requirements of the main validating bodies in the public sector of higher education.

Salary Scale: Grade V £15,390–£17,091 plus London Allowance

For further information concerning the appointment and application form please write to The Principal, Harrow College of Higher Education, Watford Road, Northwick Park, Harrow, HA1 3TP (Tel: 01-864 5422 Extn. 232) to whom completed applications are to be returned by 9th March 1984.

(14246)

(College of Higher Education, affiliated to the University of Leeds)

City of Wakefield Metropolitan District Council Bretton Hall

LECTURER IN EDUCATION WITH SPECIAL REFERENCE TO INTERPERSONAL RELATIONSHIPS AND SOCIAL PSYCHOLOGY

Salary Lecturer II/Senior Lecturer Burnham Scale £7,662–£10,662–£13,143. The lecturer appointed will be expected to contribute to the following: B.Ed (primary/secondary) M.A. courses, Advanced Diploma in Education, PGCE and Guidance and Social Work Courses.

Candidates must have the appropriate academic qualifications, experience in a counselling/guidance capacity and have a special interest in human interaction skills. Group work and related areas would be considered. They should combine an interest in academic studies with a strong desire to relate theory to practical situations.

Further details and application forms from The Registrar, Bretton Hall College, Bretton, West Yorkshire WF4 4LG. Telephone: Wakefield 830271 ext 410. Tel: Bretton 830271 ext 410. To be returned by 16th March 1984.

Unless applicants clearly indicate in writing within 2 weeks of the specified closing date, they will be taken to assume they have been considered for the vacancy advertised and will not hear further.

HS

DORSET INSTITUTE OF HIGHER EDUCATION

Department of Tourism, Recreation and Field Studies requires a

Lecturer II/ Senior Lecturer in TOURISM (Marketing)

The successful applicant, a graduate, will be expected to demonstrate a background of marketing management in the travel trade. Experience in advertising, promotion and public relations, product and market development is seen as essential.

Salary Scale: LII £7,815 – £11,568 p.a. SL £10,662 – £13,662 (Bar) £13,143

Further details and application forms are available from The Director's Secretary, Dorset Institute of Higher Education, Wallisdown Road, Poole, Dorset BH12 5HB, enclosing SAE.

(14267)

Librarians

Royal Military College of Science

LIBRARIAN

Based at Shrivenham in Oxfordshire, RMCS provides a range of undergraduate, postgraduate and post experience courses for mainly army personnel and also supports an active research programme. From 1 August, 1984 Cranfield Institute of Technology will be taking over the Civilian teaching and research activities at the College. We now seek a Librarian to take charge of the college library and who will be required to develop and maintain cost effective library services to support both teaching and research activities. Candidates should be graduate, Associate Members of the Library Association, and have some previous library and information management experience. Some familiarity with science, technology and/or management disciplines would be an added advantage. The successful candidate will be expected to participate in making future further library staff appointments. Salary paid will be on University scale S5 for senior library staff (up to £14,895). Some contribution will be made towards removal expenses.

Further details and an application form can be obtained from Cranfield Institute of Technology, Cranfield, Bedford. MK43 0AL. (0234) 750111 Ext. 3337. Completed forms to be returned by 2nd March. HIS

Research & Studentships

Heriot-Watt University

Department of Mathematics

RESEARCH ASSOCIATESHIP

Applications are invited for a postdoctoral research assistantship in sponsored by the Science and Engineering Research Council to work on a project (under the direction of Professor M. Bell and others) involving the study of nonlinear partial differential equations that describe phase transitions such as fracture and phase transitions. Preference may be given to applicants with interests in one or more of the following areas: differential analysis, differential equations, variational methods, continuum mechanics, numerical analysis.

The appointment will commence on October 1st 1984 and will be for up to 3 years at an initial salary of £7,630 per annum.

Application forms, and further particulars are available from the Staff Officer, Chambers Street, Edinburgh, EH1 1HX, to whom completed forms should be returned by March 12th, 1984 quoting reference no. 13/84.

HII

The Polytechnic Wolverhampton

RESEARCHER/S

Applications are invited for researchers to work on the following projects:

(i) Design criteria for lock mechanisms;

(ii) Use of industrial waste materials in the manufacture of hydraulic cement.

Applicants should have a good Honours degree in a relevant discipline.

Successful candidates will be encouraged to register for a higher degree.

Details and application forms (quote reference no. as advert.) from Establishments Officer, The Polytechnic, Wolverhampton WV1 1SB (0902) 710664 (answerphone).

HII

Third World Quarterly

RESEARCH ASSISTANT

Requires a graduate to monitor developments on North-South issues as well as generally on behalf of the small editorial staff.

Absolutely diligent person with ability to write large amounts of material in short time and scrupulous in writing clearly. Typing skills essential.

Salary: £6,000 + [illegible]

Write with detailed Curriculum Vitae to: Mary Turner, Third World Quarterly, Journal of Third World Studies, [illegible] Road, London [illegible]

Nene College Northampton

HEAD OF THE SCHOOL OF CHIROPODY

On 1st September 1984, as a joint venture with the Local Health Authority a new School of Chiropody will be established at Nene College, a thriving institution providing a wide range of further and higher education courses.

The college is seeking to appoint an experienced and dynamic Head of School to lead this exciting venture. The appointment will be at the Senior Lecturer/Principal Lecturer (Burnham F.E.) level, depending on the qualifications and experience of the successful applicant.

Candidates with appropriate qualifications in Chiropody, teaching and/or administrative experience in this field as well as a desire to match their leadership qualities against the challenge of this development should telephone Dr John Frain, Deputy Director or Mr David George, Head of Science at 0604 715000 for further details. It is imperative that potential applicants do this since the College wishes to make an appointment to the post with effect from 1st May 1984. Interviews will be held as soon as possible.

(14294)

Bath College of Higher Education (Incorporating Bath Academy of Art)

County of Avon

Following the merger of the above two colleges the Governors are now re-structuring the college into three Faculties and applications are invited for the new posts as Head of Faculty (Burnham Grade VI)

POST A FACULTY OF ART AND MUSIC
POST B FACULTY OF EDUCATION
POST C FACULTY OF HOME ECONOMICS, SCIENCE AND HUMANITIES

Further details may be obtained from the Director, Bath College of Higher Education, Newton Park, Newton St. Loe, Bath, Avon BA2 9BN to whom applications (no forms) should be returned by 2nd March 1984. HS

Derbyshire College of Higher Education

POSTGRADUATE RESEARCH ASSISTANT IN GEOLOGY

To investigate metamorphism of calc-silicate and related rocks in the NE Dalradian.

Candidates should have a good honours degree in Geology and would be expected to register for a higher degree.

Salary Scale: £5,603–£4,200

Application forms and further particulars from the Staffing Officer, Derbyshire College of Higher Education, Kedleston Road, Derby DE3 1GB, telephone Derby 47181, extension 223, to whom completed forms should be returned by Monday, 12th March 1984. HS

KINGSTON POLYTECHNIC

School of Electronic Engineering and Computer Science

RESEARCH COMPUTING OFFICER

A post is available in a small research group in the School working on the computer-aided design of Engineering systems. The project is funded by the Science and Engineering Research Council and is being carried out jointly with Imperial College, London, and the University of California, Berkeley. The person appointed will take part in the design and development of an advanced interactive design support environment using the sophisticated graphical facilities of the workstations, numerical methods, continuum mechanics, numerical analysis.

The appointment will commence on October 1st 1984 and will be for up to 3 years at an initial salary of £7,630 per annum.

Application forms, and further particulars are available from the Staff Officer, Chambers Street, Edinburgh, EH1 1HX, to whom completed forms should be returned by March 12th, 1984 quoting reference no. 13/84.

HII

University of Aberdeen

Department of Chemistry

POSTDOCTORAL RESEARCH FELLOWSHIP

Applications are invited to join a research team whose objective is to establish a scientific basis for the physical and chemical immobilisation of certain radioactive wastes in cement based systems, in order to commitment of the staff of the members of the Commission of the European Communities, with which continued for a further period.

Salary depending on qualifications and experience in the range 1A scale for Research Assistants, Bonus Star (£7,195–£11,037) with appropriate placing.

Further particulars and application forms from the Secretary, The University, Aberdeen AB9 2UB with applications (6 copies) should be lodged by 16 March, 1984.

Informal enquiries may be made to Dr. [illegible] Ext. 2442).

(14281)

HII

Research & Studentships continued

The University of Manchester

Department of Metallurgy and Materials Science

POSTDOCTORAL RESEARCH ASSOCIATE

Applications are invited for the above post from suitably qualified materials scientists, metallurgists or chemists for the above post in a three year project to study the production, evaluation and utilisation of refractory metal pre-alloyed powders. The project is sponsored by BSRC in cooperation with IMI Limited. Experience in powder handling and processing would be an advantage. Initial salary will be £7,190 – £8,930 (Superannuation).

Applications including the names and addresses of two academic referees should be sent as soon as possible to Dr. F.R. Sale, Department of Metallurgy and Materials Science, The University, Manchester M13 9PL, from whom further details are available.

HII

Conservative Research Department

seeks to appoint immediately

HEAD OF ECONOMIC SECTION

The post involves supervision of a small team, and direct responsibility to the Department's work on public expenditure, monetary matters and general economics.

A good degree in economics is sought, together with definite commitment to the Conservative Party.

This post should be attractive to a person with a developing interest in practical politics, preferably aged between 26 and 35.

Salary in line with academic equivalents. Flexible pension arrangements.

Further particulars from Mr P. J. Cropper, Director, Conservative Research Department, 32 Smith Square, London SW1.

HII

University of Aberdeen

Health Economics Research Unit

ECONOMIST: RESEARCH FELLOW

A new post for a research fellow in the Health Economics Research Unit, which is concerned with research, advice, consultancy and teaching in health economics, is to be filled during 1984. The post will involve consultancy work with the NHS and research and possibly teaching on various aspects of economics in health and health care. Applicants must hold a degree in economics, be experienced in applied research and preferably but not necessarily have knowledge of health economics. The post is for three years. Salary is in the range £6,310 to £11,615 per annum with appropriate placing.

Further particulars and application forms from the Secretary, The University, Aberdeen AB9 2UB with completed applications (2 copies) should be lodged by 16 March, 1984.

HII

Holidays and Accommodation

LONDON UNIVERSITY (Goldsmiths' College) offers attractive self-contained flats and houses during Easter and Summer Vacations. All are South of the River within easy reach of Charing Cross. The rates are very reasonable. Further information apply to: Estates and Service Office, Goldsmiths' College, Lewisham Way, SE14 6NW Tel: 692 7171 Ext. 2319.

HS24

Escape to the Hebrides

We offer a range of cruises aboard Kylebhan to the Hebridean Islands and St. Kilda. Ideally suited for all interests and ages. Please write or telephone for brochure. Hebridean Holidays, Heron House, Troon, Ayrshire. (0292) 314444.

H24

Administration

COUNCIL FOR NATIONAL ACADEMIC AWARDS

Registrar for Arts and Humanities
Registrar for Education

Applications are invited for the above posts which will become vacant on 1st May, 1984.

The Registrars will be responsible for the management and operation of units which are involved in the work of validating courses in arts and humanities and in education (mainly the initial training and in-service training of teachers); for liaison with, and advice to, institutions and other bodies and with Chairmen and members of the Boards and Panels involved in this work.

Candidates for the posts should be well qualified academically and/or professionally and should have appropriate teaching and/or academic administrative experience. In addition experience of managing both staff and other resources is desirable.

The salary on appointment will be within the scale £16,377–£20,208 p.a. including London Weighting.

Further particulars of both posts may be obtained from: Assistant Secretary (Personnel), CNAA, 344/364 Gray's Inn Road, London WC1X 8BP. Tel: 01-278 4411 to whom applications giving details of qualifications and experience and the names of two referees should be submitted by 13th March, 1984.

(14238)

NORTHERN COUNCIL FOR FURTHER EDUCATION

SECRETARY

The Council invites applications for the post of Secretary consequent upon the retirement of the present Secretary on 30th September, 1984. The successful applicant will be required to assume office on 1st October, 1984.

The Council is one of ten Regional Advisory Councils in England and Wales and also has an examining function for a range of further education courses.

Applicants must be graduates with administrative experience at a high level in further and higher education; teaching and/or industrial or commercial experience are additional desirable qualifications.

The Conditions of Service will be those of the Joint Negotiating Committee for Chief Officers of Local Authorities. The salary will be in accordance with the JNC scale at the minimum point for a population group of 150,000–250,000 together with the appropriate increments (currently £18,267–3 × £492–£19,743).

The post is superannuable and carries an essential user car allowance.

Assistance will be given with re-location expenses.

Further particulars and forms of application (returnable not later than 7th March) may be obtained from the Secretary to the Council, 5 Grosvenor Villas, Grosvenor Road, Newcastle upon Tyne, NE2 2RU.

(14282)

Property

LONDON FLAT Highgate Nr Heath, Schools & Shops: Converted Stables, 2ST, Reception Room, Balcony, 2 Bedrooms, Garden & Garage. To yr. lease. £29,000. Tel: 01-348 0125 or Nr Petherwin (056685) 248.

B30

Department of Education and Science

HM Inspectors of Schools

Applications are invited from men and women, preferably aged between 35 and 45, for appointments as HM Inspectors. HMI inspect educational institutions as part of both general and specialist assignments and provide advice to the Department and throughout the education system.

Current vacancies are for specialists in:

SECONDARY EDUCATION

Home Economics: Ref 3/84

Candidates should have good specialist qualifications and substantial experience of teaching Home Economics in schools. Experience at a senior level in schools, or in teacher training or of advisory work would be an advantage.

Music Ref 4/84

Candidates should have a degree or an equivalent qualification in music. It is essential that they should have substantial experience of teaching music in schools; it would be an advantage to have had some experience of teaching music in multi-ethnic schools. Relevant experience in teacher training institutions or in the advisory service would be an additional advantage.

Candidates with experience in industry or in careers other than education may apply, but it is important that they should normally have completed at least 6 years teaching of the relevant subject.

Those appointed will have opportunities to take part with other HMI in work related to current developments such as the Lower Attaining Pupils Programme, the Technical and Vocational Education Initiative, and the White Paper on Teaching Quality.

FURTHER AND HIGHER EDUCATION

Art and Design: Ref 5/84

Candidates should have good specialist qualifications and experience of teaching fine art, or photography, or film and television studies, or design, or graphics in further and higher education. Experience is sought in the teaching of these subjects in single or combined subject degrees, DATEC, and in the application of these subjects to the education of teachers and other professions.

Business and Management Studies: Ref 6/84

Candidates should have academic or professional qualifications in a major aspect of business or management studies.

Teaching experience in a senior post in further or higher education is essential and experience of employment outside the education service is desirable. For some of the vacancies a professional qualification in accounting or company secretaryship is desirable. Recent experience of introductory pre-vocational and adult retraining programme sponsored by the MSC, the LEAs and other agencies will be an advantage.

Economics: Ref 7/84

Candidates should have good specialist qualifications, and experience of teaching economics and related disciplines in further and higher education. Experience is sought in teaching the subject in single, joint honours or combined subject degrees, and in the applications of this subject in business studies, and to the education of teachers and other professions.

HIGHER EDUCATION AND TEACHER TRAINING

Social Science: Ref 8/84

Candidates should have appropriate qualifications and substantial and varied experience of teaching in sociology, psychology, social policy or social administration.

Experience is sought in the teaching of the subjects in single, joint Honours or combined subject degrees, and/or in the application of the subjects to the education of teachers and other professions.

Humanities: Ref 9/84

Candidates should have appropriate qualifications and substantial and varied experience in the teaching of English, History, Geography, French or Drama in higher education, in relevant single, joint Honours or combined subject degrees, or in the training of teachers.

Qualified teacher status and experience of teaching in schools would be additional qualifications for some of these posts.

Starting salary for all posts is within the range £15,600–£20,600 (higher in London). Relocation expenses of up to £3,000 may be payable.

Application forms to be returned as soon as possible (and not later than 9 March 1984) may be obtained from Mr E. D. Foster, Department of Education and Science, Room 16/17, Elizabeth House, 39 York Road, London SE1 7PH, telephone 01-928 9222, extension 2786 or 2837.

Please quote the appropriate reference.

(14209)

THE NATIONAL MARRIAGE GUIDANCE COUNCIL

seeks a

SENIOR OFFICER

on the retirement of the Head of Counselling to be responsible for Training and the oversight of the Marriage Counselling Service provided by the national network of Marriage Guidance Councils.

Salary: £10,079–£14,803

Further details from:
The Administrative Officer
The National Marriage Guidance Council
Herbert Gray College
Little Church Street
Rugby, Warwickshire CV21 3AP
Tel: 0788 73241

Closing date for applications: 26th March, 1984

(14220)

University of Dundee

ASSISTANT SECRETARY (PERSONNEL)

Applications are invited from candidates with a degree or appropriate professional qualification for the above post.

The person appointed will report to the Senior Assistant Secretary and Personnel Officer whose remit covers all aspects of personnel administration and industrial relations throughout the University. Candidates should either have had substantial experience in personnel administration in the public or private sector or by possession of a good combination and legal experience or in other ways, be able to demonstrate the ability quickly to assume responsibility for major sections of the university's personnel work.

Provided the experience and attributes of the successful candidate warrant it, the appointment will be made on the Administrative Grade 1A scale (Currently £11,160–£14,199), to be reviewed from April 1984).

Further Particulars are available from the Secretary, The University, Dundee, DD1 4HN with whom applications containing full details of age and the names of three referees should be lodged by 30 March 1984. Please quote reference E87/84.

H19

UNIVERSITY OF STRATHCLYDE
STRATHCLYDE BUSINESS SCHOOL
Master of Business Administration Programmes

ADMINISTRATOR

Applications are invited from Graduates, with at least 3 years' experience in office administration, and experience in new office technology, for the recently created post of MBA Administrator (tenable for 5 years in the first instance). The successful candidate will be responsible for the development and operation of effective administration systems for the MBA programmes.

Salary on Range IA (£8,310 - £11,615 p.a.) for Administrative Staff. USS benefit.

Application forms (quote 9/84) are available from Academic Staff Office, University of Strathclyde, McCance Building, 16 Richmond Street, Glasgow G1 1XQ. Closing date for applications: 16 March 1984.

(14241)

TESTING SERVICES DEVELOPMENT OFFICER

up to £14,000 West End

Complimenting the team in our Industrial Training, Testing and Research Department.

This additional post is for the development and promotion of industrial training and testing services which include:

- a consultancy service on achievement measurement
- the development of assessment materials including multiple choice, written and practical tests
- the provision of training courses in testing techniques.

Applicants should:

- have had several years experience in the development of achievement measures
- have the ability to explain clearly the requirements of test development to non-experts both in informal discussions and in formal presentations and to prepare reference materials for their use
- hold a degree, preferably in Psychology and have a working knowledge of statistics as applied to test theory
- have a dynamic approach to marketing activities
- ideally have had experience in an industrial or commercial setting.

For confidential application and further details contact The Personnel Officer, City & Guilds of London Institute, 76 Portland Place, London W1N 4AA or telephone 01-580 3050.

(14255)

City+Guilds

Tutors are able to work from their own home with one or two students at a time are of particular interest.

We can offer challenging students, excellent facilities and high earnings.

Please apply in writing, enclose a complete C.V. to Box No. 0751.

ST

Overseas

THE DESIGNATED SCHOOLS BOARD
Malawi

Applications are invited for the post of:-

EXECUTIVE SECRETARY TO THE DESIGNATED SCHOOLSBOARD

The post entails overall supervision of the administration of the Secretariat, organisation of the appointment of teaching and administrative staff within the schools, and keeping a close relationship with the Ministry of Education and Culture, and the Headmasters of the five schools (4 Primary and 1 Secondary) administered by the Board.

Applicants should be over 40 years of age and have qualifications and experience in at least one of the following fields:-

(a) Education, Educational administration or related experience.
(b) Business administration, i.e. have held a senior post in Commerce or managed a business.

A knowledge of accountancy would be an advantage but is not essential.

Salary will be in the region of MK20,000 per year according to qualification and experience. Appointment on contract includes terminal gratuity and leave pay.

Application should be addressed to:
The Chairman of the General Purposes Committee
Designated Schools Board
P.O. Box 5698, Limbe, Malawi

(14223)

Colleges of FE

Gloucestershire College of Arts & Technology

Department of Town and Country Planning – Cheltenham Campus

POST NO: 473U007 LECTURER II
POST NO: 473U010 SENIOR LECTURER

Applications are invited for two posts available for a fixed period of four terms, from 1st April 1984 to 31st July 1985, to teach on the DA (Hons) Town & Country Planning Course, the final intake of which was admitted in September 1983. At least one of the persons appointed should be a qualified planner having had recent experience in planning practice, preferably in rural or rural planning. Previous experience of teaching at degree level will be an advantage for one of the posts. Concern for the academic and personal welfare of students is essential. Both the appointed persons will have a full range of teaching duties including the supervision of practical work.

Application forms and further details available from: Administrative Officer (Staffing), Glos. CAT: Cheltenham Lane, Gloucester GL3 9HW. S.A.E. Please. HT

Tutors in all Subjects

Tutors in all subjects needed by large tutorial organisation in Oxford area. Must be very experienced with G.C.E. 'A' and 'O' level, retake students, able to offer either individual or group tuition (both an advantage).

Tutors able to work from their own home with one or two students at a time are of particular interest.

We can offer challenging students, excellent facilities and high earnings.

Please apply in writing, enclose a complete C.V. to Box No. 0751.

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RMIT

AUSTRALIA

Head

Department of Fine Art

Applications are invited for the position of Head, Department of Fine Art. Applicants should be professional practitioners in one of the fields of Fine Art and have teaching experience at tertiary level. A formal qualification in an appropriate discipline and familiarity with administration would be an advantage.

The Department offers degree courses in painting (including printmaking), sculpture and ceramics and post-graduate diplomas in these disciplines. A diploma course in gold and silversmithing is also offered.

Further information can be obtained by writing to Mr D.R. Clarke, Dean, Faculty of Art, or by telephoning (03) 341 2218.

Salary: $A45,841 per annum.

A position description should be obtained from Staff Branch, RMIT, G.P.O. Box 2476V, Melbourne, 3001, Victoria, Australia (03) 341 2337, Applicants should quote Ref. No. 151/01/AN to the Staff Officer by 31/5/1984.

Royal Melbourne Institute of Technology Limited

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COMMONWEALTH SCHOOLS COMMISSION
Curriculum Development Centre Canberra
DIRECTOR
(Curriculum Development)
$A50,481

The Australian Government has announced its intention of re-establishing the national Curriculum Development Centre within the Commonwealth Schools Commission which is part of the Commonwealth Education and Youth Affairs portfolio. The Commonwealth Schools Commission is the national advisory body of schools funding and it presently administers more than 30 programs of financial support to Australian schools. The re-established Curriculum Development Centre will work in close co-operation with the Commision and will have a separate governing Council. In turn the Centre will work in close consultation with State and non-government education authorities.

The Centre is to be located in Canberra, Australia's national capital. Canberra is a modern planned city with a population of approximately 250,000, in which many national institutions are located. It is noted for its sunny climate conditions and excellent recreational facilities.

The functions of the Centre will be to:
- develop and advise on policies on Curriculum matters aimed at completing national priorities for school education;
- devise and develop and to promote and assist in the devising and development of school curricula and school educational materials;
- undertake, promote and assist in research into matters related to school curricula and school educational materials;
- make available or supply school curricula and school educational materials;
- collect, assess and disseminate, and to promote and assist in the collection, assessment and dissemination of, information relating to school curricula and school educational materials;
- advise the minister in relation to making payments for approved curriculum projects;
- do anything incidental or conducive to the performance of any of the foregoing functions.

Against this background, the organisation is seeking to fill a newly created office of:

DIRECTOR
(Curriculum Development)

The role of the Director will be to:
- direct the financial and curriculum operations of the Centre;
- report to the Minister for Education and Youth Affairs within the terms of the relevant legislation;
- provide the governing Council and the Chairman of the Commission with high level policy advice on curriculum matters;
- implement the decisions of the Council;
- work in concert with other units of the Commission.

The Director will also participate as a member of the executive of the Commonwealth Schools Commission.

The Commission will seek to appoint to the position a person with the following background:
- academic qualifications relevant to the field of endeavour;
- proven administrative and managerial skills;
- a comprehensive knowledge of education structures and processes, preferably relevant to those in Australia, particularly at the school level;
- highly developed personal communications skills.

The position has been established in the Second Division of the Australian Public Service and as such attracts the superannuation, leave and other conditions applying within the Service. Details may be obtained from the Australian High Commission, London (Telephone Mr R. Rankin 01-438 8829).

The person selected for this position may be offered permanent appointment to the Service or a period of temporary employment for a minimum of 3 years. A temporary employee would not be eligible to contribute to the superannuation scheme.

The Public Service Act currently requires that a person being appointed as an officer of the Australian Public Service be a British subject (by virtue of the present Citizenship Act, Australian citizens are British subjects). The Government has announced its intention to amend the Public Service Act to require a person being appointed to the Australian Public Service to be an Australian citizen. Following such amendment, persons who are British subjects but not Australian citizens will generally be ineligible to join the Australian Public Service as officers. These citizenship requirements will not apply to temporary employment.

Reasonable costs incurred in attending for interview will be met by the Australian Government. Removal and relocation costs will be subject to reimbursement within limits.

Further information may be obtained by writing or cabling the Recruitment Officer, Commonwealth Schools Commission, PO Box 34, Woden, ACT 2606 Australia.

Applications marked CONFIDENTIAL should be sent to: The Chairman, Commonwealth Schools Commission, PO Box 34, Woden, ACT 2606, Australia by close of business 8th March 1984.

AUSTRALIA

Adult Education

Hillcroft College
Surbiton, Surrey
KT6 6DF

PART-TIME LECTURER IN PSYCHOLOGY

required two/three days per week to teach mature women students on Combined Studies and two year BTEC/professional CNAA Social Studies courses. Interest or experience in areas relevant to Social Work and/or Counselling preferred. Commencement September 1984. Closing date for applications 8th March. Details from The Principal. Tel: (01) 399 2688.

Holidays and Accommodation continued

Martinique, French Antilles July 24/Aug 26: Sailing Carnival Cruise. Travel with the Association of U.S. Collegiate Studies. Box O, St. Petersburg, Coral Gables, Florida 33134. (1-85)

CAMBRIDGE EDUCATION CONSULTANTS LIMITED

Cambridge Education Consultants provides consultancy services in most fields of education and training in developing countries. We would like to hear from education specialists interested in undertaking short- or long-term assignments overseas. Our current interests include projects concerned with primary education, technical and agricultural education and training, design of educational buildings and furniture, production of books and materials, education planning and management and public and private sector management training.

Please send curriculum vitae to Perran Penrose, Cambridge Education Consultants, Demeter House, Station Road, Cambridge CB1 2RS. (1426)

THE EUROPEAN UNIVERSITY INSTITUTE IN FLORENCE

offers law graduates places for 1984/85 for

THE DEGREE OF MASTER OF LEGAL STUDIES IN COMPARATIVE EUROPEAN AND INTERNATIONAL LAW (LL.M.)

(duration 1 year)

OR

THE DEGREE OF DOCTOR IN LAW OF THE EUI

(duration 3 years)

Applications are invited on special forms available from The Academic Service, Badia Fiesolana, I-50016 San Domenico di Fiesole (FI), Italy. Tel: 055/47931, from which further information and application forms are available. (1425)

TEACHING POSITIONS IN (Yarmouk University) Irbid – Jordan

Yarmouk University invites applications for teaching positions in one of the following posts for the academic year 1984/85:

History, adapted socio-political and presentation of international tournaments, basketball, wrestling, handball, tennis, table tennis, boxing, athletics, swimming, boating and international tournaments).

Master required. Ph.D. preferred.

Applicants are invited to send their curriculum vitae to reach the University before March 31st, 1984 to: Yarmouk University, Personnel Affairs Division, Irbid, Jordan.

The University's policy is not to discriminate on the grounds of sex, race or religion in their employment or in the implementation of their policy in admissions to

UNIVERSITY OF CAPE TOWN

Postdoctoral Research Fellowships 1985

The University of Cape Town annually invites applications for doctoral Research Fellowships to be held at the University.

The Fellowships are tenable for a maximum of twelve months on a stipend attached to the current Fellowships is R1 500 p.m. (£1 = R1,90 approx.). Successful candidates from abroad will receive an additional travel grant up to a maximum of R2 000. (Some increases in these values to keep pace with inflation is possible for 1985). There is no restriction to any particular field of research.

Preference will be given to recently qualified research workers and to candidates not more than 30 years of age. Fellowships are normally awarded for a period of two years, but may be renewed for a third year in exceptional circumstances. Provision is also given for applicants whose research interests fall outside the normal faculty boundaries to work with those of the appropriate host department.

Applications must include full details of the applicant's academic career, research programme in addition to a full curriculum vitae and the names of two referees whom the University may consult. Short-listed candidates may be required to attend for interview. Preference will be given to applicants who are not, on the grounds of sex, race, colour or national origin, precluded from taking up their duties are flexible and can be arranged to suit special circumstances of each candidate.

Applications should be addressed to the Head, Research Administration, University of Cape Town, Private Bag, Rondebosch, 7700 South Africa, so as to reach him by 10 June 1984. The first round of award letters will be despatched by the end of August 1984.

Faculty Members for MU'TAH UNIVERSITY – JORDAN

Mu'tah University invites application for the following posts with the following qualifications:

1. Assistant Professor – English

Qualification PhD (or equivalent). Specialization English language and literature. Three years of relevant university teaching.

2. Assistant Professor – Physics

Qualification PhD (or equivalent). Specialization Physics. Five years of relevant university teaching.

3. Assistant Professor – Mechanical Engineering

Qualification PhD (or equivalent). Specialization Mechanical Engineering. Five years of relevant university teaching.

4. Assistant Professor – Mathematics

Qualification PhD (or equivalent). Specialization Mathematics. Five years of university teaching.

Salary and Benefits (1 JD = £1.90 approx) from 450-660 JD depending on post qualification experience. Benefits include social security, health and life insurance and free housing.

Applications, accompanied by cv, must be addressed to: P.O. Box 5076, Mu'tah Liaison Office, Amman, Jordan.

UNIVERSITY OF CAPE TOWN

Assistant Lecturer and Lecturer in English

Applications are invited for the above post, vacant from 1 January 1985, although an earlier date of appointment may be possible. There are opportunities in the Department to teach the usual range of English Language and Literature. Applicants should state their area of special interest, but should be prepared to teach in a reasonably wide field.

Appointment, according to qualifications and experience will be made on the salary scale:

Assistant Lecturer R9 896 x 672–10 377 x 780–14 277
Lecturer R12 957 x 780–16 557 x 936–22 173.

Per annum, plus a pensionable allowance of 12%, with an annual bonus of nearly one month's salary and attractive staff benefits.

Applicants should submit a full curriculum vitae stating the name of three referees (or from whom they wish to apply) and the names and addresses of these referees not later than 20 April 1984 to the Registrar (Attention: Appointments Office), Department E/423, University of Cape Town, Private Bag, Rondebosch 7700 South Africa. Further information may be obtained from the above address or from the Secretary, SA Universities Office, Chichester House, 278 High Holborn, London WC1V 7HF.

The University's policy is not to discriminate on the grounds of sex, race or religion in their employment or in the implementation of their policy in admissions to

Overseas continued

THE BRITISH COUNCIL

Posts overseas

China

Senior Lecturers and Lecturers in English as a Foreign Language at Universities and Teacher Training Institutes in Peking and provincial centres

Duties: Teams of 2 or 3 lecturers engaged in projects to provide language improvement and methodology classes for Chinese secondary and tertiary level teachers; EAP and study skills instruction for postgraduates. Some senior posts will include teaching of applied linguistics, syllabus design and materials production.
Qualifications: Candidates must be British citizens, holding a first degree in English or other Modern Language, postgraduate TEFL qualification, minimum 5 years' relevant TEFL experience for Senior Lecturers and 2 years' experience for Lecturers.
Salary: Yuan 500–700 per month plus annual Sterling subsidy of £5,202–£5,418 (3.00 Yuan = £1).
Benefits: Free accommodation, air fares, installation grant, superannuation contribution.
Contract: One year (renewable) from September 1984, guaranteed by the British Council.
Closing date for applications: 16 March 1984.
Reference: 84 B 1–10TH.

Czechoslovakia

3 Lecturers in English to teach in the English Departments of: Charles University, Prague Comenius University, Bratislava Palacky University, Olomouc

Duties: To teach English as a foreign language to Czechoslovakian undergraduates, 18–22 years.
Qualifications: Candidates must be British nationals, between 25–40 with a British Arts degree, preferably in English or Modern Languages, and a diploma or equivalent qualification in TEFL. At least two years' relevant teaching experience is essential. Single candidates are preferred and some knowledge of a Slav language would be an advantage. For Olomouc, an interest in philosophy is desirable.
Salary: 2,000 Crowns per month, minimum, paid locally (£1 = 16.35 Kcs.) Sterling subsidy £4,188 pa paid in Britain.
Benefits: Free accommodation, superannuation contribution, return fares, baggage.
Contract: One year local contract renewable starting September 1984.
Reference: 84 B 37–39TH.

Hungary

2 Lecturers in English for Eotvos Lorand University, Budapest Kossuth Lajos University, Debrecen

Duties: To teach English as a foreign language to Hungarian undergraduates, 18–22 years.
Qualifications: Candidates must be British nationals, between 25–35, with a British degree in English or a Modern Language plus a diploma or equivalent qualification in the Teaching of English as a Foreign Language and a minimum of 5 years' teaching experience for Budapest and two years for Debrecen. Single candidates are preferred. An MA in Linguistics or related subject is useful.
Salary: 4,400–5,100 forints per month, tax free, paid locally. (£1 = 63.85 forints). Sterling subsidy £4,188 pa paid in Britain.
Benefits: Free accommodation, superannuation contribution, return fares, baggage.
Contract: One year local contract, renewable, starting September 1984.
Reference: 84 B 34–35T.

For further details and an application form, please write, quoting the post reference number to: Overseas Educational Appointments Department, The British Council, 90–91 Tottenham Court Road, London W1P 0DT.

General Vacancies

AMERICAN INSTITUTE FOR FOREIGN STUDY (AIFS)

ASSISTANT DEAN OF STUDENTS

Interesting, rewarding job looking after American students studying in London. Pastoral and organisational skills essential.
Salary £5,000 plus accommodation and meals, plus nine weeks holiday.
Applicants should be available by June 1 or August 15th. Apply in writing with c.v. to:
Anne Waters, AIFS
37 Queens Gate
London SW7 5HR
Tel: 01-581 2733. (14265)

MITCHELL
COLLEGE OF ADVANCED EDUCATION
AUSTRALIA

Mitchell College at Bathurst, NSW, 210 km west of Sydney is a multidisciplinary institution offering over 30 courses of study to postgraduate levels to over 5000 students. Short courses, research and consulting activities are also undertaken.

DEAN
SCHOOL OF NURSING AND HEALTH ADMINISTRATION

This position has been created as part of the College's commitment to basic nurse education and the introduction of a Diploma in Applied Science (Nursing) course in 1985. The existing Diploma in Health Administration will also be offered.

The Dean will establish the basic nurse education course, direct the Diploma in Health Administration course and ensure the effective academic and administrative functioning of the School. This will include membership of various committees and the development of relationships with the Health industry and related organisations.

Applicants should be qualified at post-graduate level in Nursing and/or Health Administration. Experience in tertiary level teaching and management experience will be well regarded.

DEAN
SCHOOL OF COMMUNICATION AND LIBERAL STUDIES

This School offers five courses — Bachelor of Arts in Communication (Journalism, Public Relations and Theatre/Media strands), Bachelor of Arts in Liberal Studies, Associate Diploma in Creative Arts (Visual Arts, Music and Recreation strands) and Associate Diploma in Arts. The School has 30 staff.

Teaching facilities include an FM Radio Station (2MCE-FM), a colour television studio, the Little Theatre and various other studios.

The Dean will ensure the effective academic and administrative functioning of the School, encourage and develop entrepreneurial activity, participate as a member of College Committees, and maintain close relationships with industry.

Applicants should have strong academic qualifications and expertise in at least one of the disciplines offered by the School. Experience in tertiary level teaching and management experience will be well regarded.

Further information: Dr Wayne Clarke, Deputy Principal — (063) 33 2317.

Appointments will be offered for 4 years as Dean (salary $A45,641 p.a.) then for a further 4 years or to a tenured senior academic post (salary $A39,820 p.a.).

APPLICATIONS including names and addresses of three (3) referees should be sent to:
The Registrar (Staff Appointments)
Mitchell College of Advanced Education
Bathurst NSW 2795 Australia

by March 30, 1984. 48072

Universities contd

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

Chair in the Social Services

Applications are invited for a Chair in the Social Sciences with special reference to the application of social psychology/sociology. The Department undertakes undergraduate and postgraduate teaching in sociology, social psychology and social administration. It is engaged in a wide variety of research activities, primarily of an applied nature.

This is a professor of social administration in post and candidates for the advertised post should be willing and able to offer leadership and support to both sociologists and social psychologists.

Salary within professorial range. Further particulars and application forms may be obtained from the Registrar. Closing date 6th April 1984.

Loughborough Leicestershire (1423)

Secondary Education

The Incorporated Froebel Educational Institute, Roehampton, London, S.W.15.

The Governing Body invite applications for the post of:

HEAD OF IBSTOCK PLACE SCHOOL

The post will become vacant on 1st September, 1984. There are presently 300 children in the age range 3 to 16 years attending the co-educational school.

Applicants should be university graduates. Salary according to qualified Head Teacher Group 6 plus London Allowance (Inner Area). Residential accommodation negotiable.

Further details will be sent on request to the Secretary, The Incorporated Froebel Educational Institute, 'Templeton', 118 Priory Lane, London, SW15 5JW. (14244)

Colleges of Technology

Education Committee

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